Mathematics Grade Two

Module 5: It's About Time—and Patterns, Too

Learning Technologies Branch
Alberta LEARNING

Grade Two Mathematics: Module 5

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Module 5: It's About Time—and Patterns, Too
Student Module Booklet
Learning Technologies Branch
ISBN 0-7741-1961-6

Title Page: PhotoDisc, Inc.

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Students	✓
Teachers	✓
Administrators	
Home Instructors	✓
General Public	
Other	

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- Alberta Learning, **http://www.learning.gov.ab.ca**
- Learning Technologies Branch, **http://www.learning.gov.ab.ca/ltb**
- Learning Resources Centre, **http://www.lrc.learning.gov.ab.ca**

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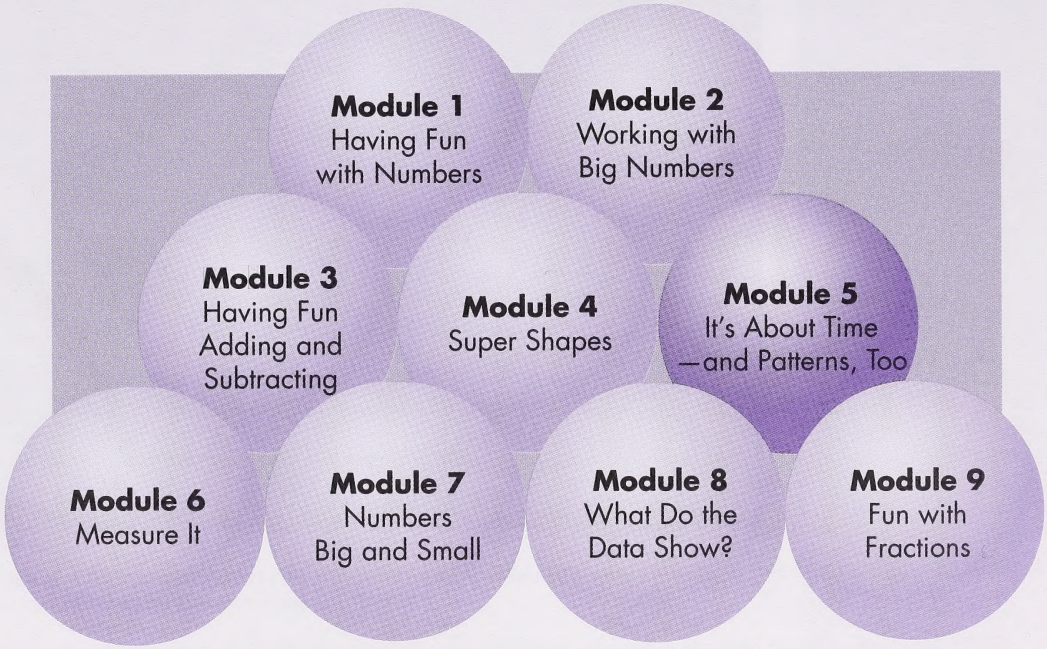
Welcome
to Grade Two Mathematics

Have you ever shared a cookie with a friend? Did you try to break it evenly so that you each got the same amount of cookie? Have you tried to figure out how tall you are? Can you tell how much time you have to do something? How much does something weigh? In Grade Two Mathematics, you will learn how to do these activities.

Look at the picture on this page. It gives the title of the Student Module Booklets you will be using. You are now using Module 5: It's About Time—and Patterns, Too.



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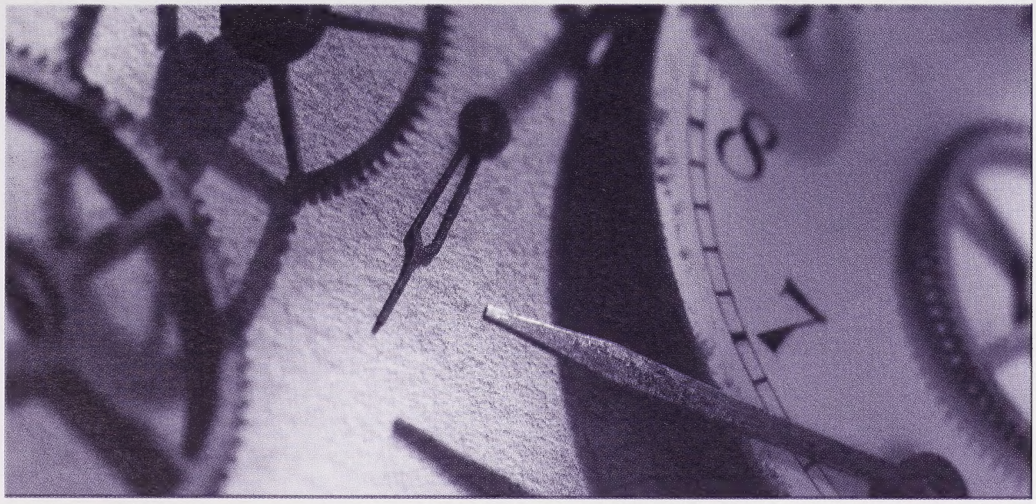
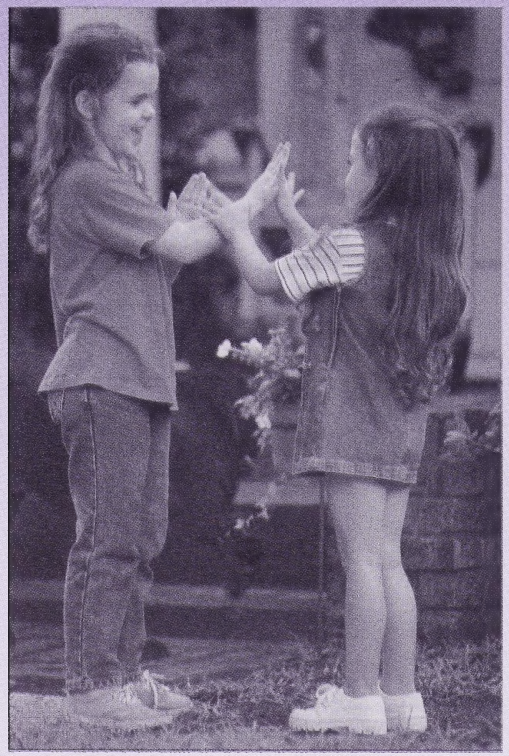
It's About Time—and Patterns, Too



Did someone ever tell you that bedtime was in ten minutes? How long is that, exactly? Does that mean you have time to read a good book or help bake some cookies before the ten minutes is up? How long does it take you to run to your friend's house? Is that more or less time than it takes you to eat an apple?



What time does your favourite TV show start? What day of the week is it on? Do you know when you were born? What month was it? What day of the month was it? What day of the week was it? These questions are all about measuring time.

In the first part of this module, you will be doing fun activities that will help you answer these questions and much more. You will learn all about time. Get ready for some timely fun!

In the second part of this module, starting with Day 9, you will be learning about patterns.

Day 1: Looking Back

Have you ever heard someone say, "Practice makes perfect"?

It means that to get better at doing something, you need to keep doing it. You are going to review number operations, write some number sentences, and solve some problems today.

See if you remember how to do all of these things.

Looking Back

Day 1

See how well you remember what you learned in Module 3.

1. Add and print the sum.

a. $8+1=$ ☐

b. $3+3=$ ☐

c. $\begin{array}{r} 4 \\ +\,2 \\ \hline \end{array}$

d. $\begin{array}{r} 6 \\ +\,4 \\ \hline \end{array}$

e. $4+4=$ ☐

f. $6+1=$ ☐

g. $\begin{array}{r} 3 \\ +\,5 \\ \hline \end{array}$

h. $\begin{array}{r} 5 \\ +\,5 \\ \hline \end{array}$

i. $8+2=$ ☐

j. $3+2=$ ☐

k. $\begin{array}{r} 2 \\ +\,2 \\ \hline \end{array}$

l. $\begin{array}{r} 9 \\ +\,1 \\ \hline \end{array}$

m. $7+3=$ ☐

n. $10+1=$ ☐

o. $\begin{array}{r} 3 \\ +\,7 \\ \hline \end{array}$

p. $\begin{array}{r} 1 \\ +\,8 \\ \hline \end{array}$

2. Fill in the missing numbers.

a. $4 + \square = 9$

b. $6 + \square = 7$

c. $\square + 4 = 4$

d. $\square + 1 = 5$

e. $4 + 4 = \square$

f. $3 + \square = 10$

3. Fill in the addition families.

$0 + 5 = 5$
$1 + \square = 5$

4. Print the rule and fill in the missing numbers.

a.

Rule:	
Input	Output
4	7
3	
5	

b.

Rule:	
Input	Output
7	8
5	
8	

5. Subtract the numbers.

a. $9 - 2 =$ ☐ c. $8 - 4 =$ ☐ e. $7 - 4 =$ ☐ g. $10 - 6 =$ ☐ i. $8 - 0 =$ ☐

b. $5 - 4 =$ ☐ d. $3 - 1 =$ ☐ f. $6 - 6 =$ ☐ h. $9 - 9 =$ ☐ j. $3 - 1 =$ ☐

6. a. $\begin{array}{r} 5 \\ -\,2 \\ \hline \end{array}$ b. $\begin{array}{r} 4 \\ -\,1 \\ \hline \end{array}$ c. $\begin{array}{r} 8 \\ -\,2 \\ \hline \end{array}$ d. $\begin{array}{r} 9 \\ -\,1 \\ \hline \end{array}$ e. $\begin{array}{r} 10 \\ -\,8 \\ \hline \end{array}$ f. $\begin{array}{r} 9 \\ -\,8 \\ \hline \end{array}$

7. Fill in the missing numbers.

a. $10 - \square = 3$

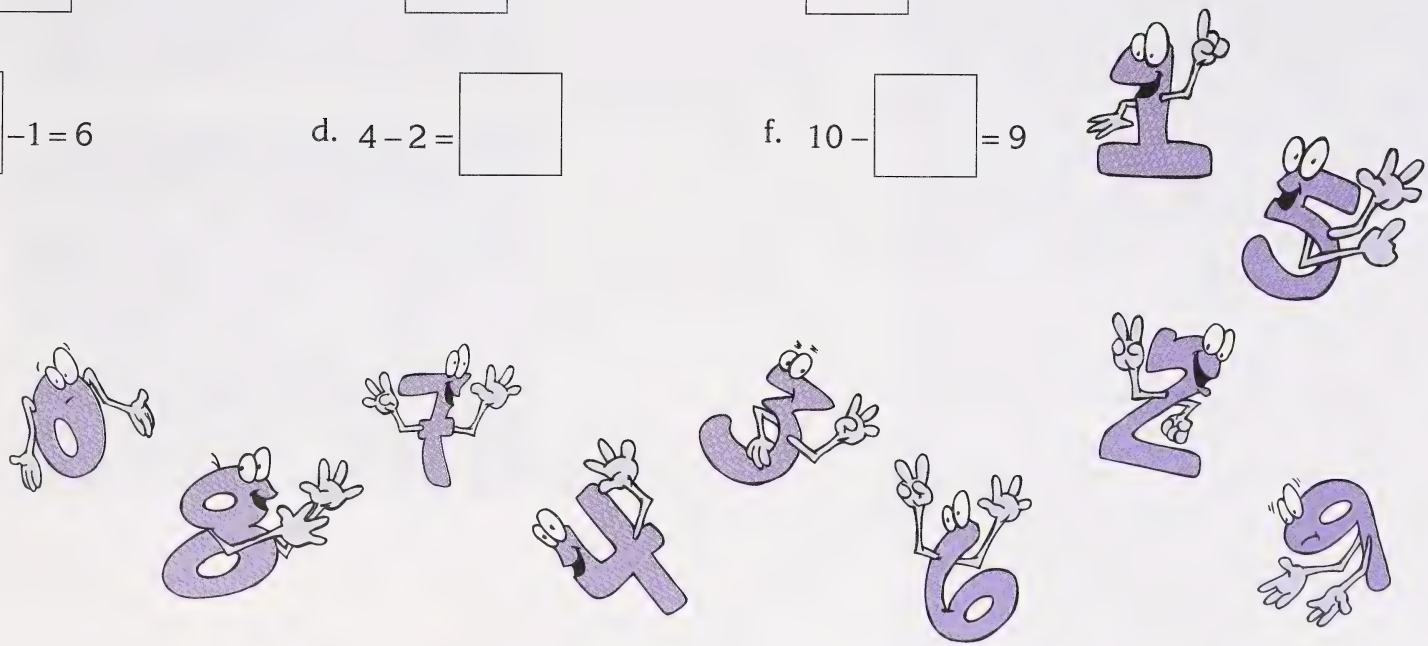
b. $\square - 1 = 6$

c. $7 - \square = 5$

d. $4 - 2 = \square$

e. $\square - 4 = 4$

f. $10 - \square = 9$



8. Follow the rule and print the answers.

Subtract 5	
7	
10	
6	
9	
8	
5	

9. Print the rule and fill in the missing numbers.

a.

Rule:	
Input	Output
9	3
8	
10	

b.

Rule:	
Input	Output
8	5
5	
9	

Looking Back

10. Print the number sentence for each problem. Then print the answer in the box.

    a. Jasper is baking some cupcakes. They take 20 minutes to bake. They have been in the oven for 18 minutes. How much longer do they have to be in the oven?

    _____

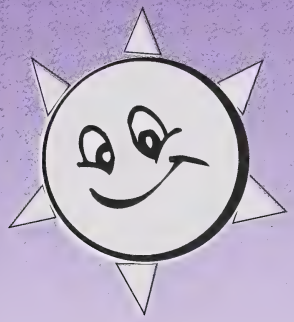
    The cupcakes have to be in the oven ☐ minutes longer.

    b. Elena's home instructor gave her 15 stickers. She also gave her 3 stars. How many stickers and stars does Elena have altogether?

    _____

    Elena has ☐ stickers and stars altogether.

Remind the student that a number sentence is an equation. For example, $3 + 2 = 5$ is a number sentence because it is a sentence with numbers.



c. Jasper counted 13 days that were cloudy in the month of January. There were 18 sunny days. How many more days were sunny than cloudy?

_____

There were ☐ more sunny days than cloudy days.

11. Make two addition and two subtraction number sentences using the numbers 4, 10, and 6.

4 10 6

12. Show how you add and subtract these numbers using doubles. Two examples are done for you.

$5+6=$ 11

$5+5+1=11$

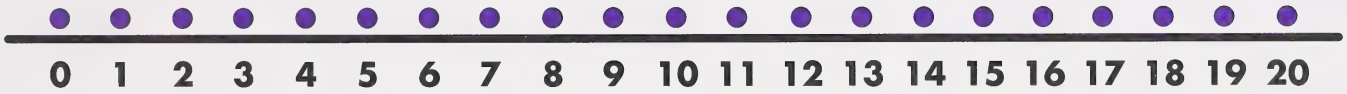
$18-9=$ 9

$9+9=18$

a. $7+8=$ ☐

b. $12-6=$ ☐

13. Use the number line to add and subtract.



a. $19-5=$ ☐

b. $13+6=$ ☐

c. $19-13=$ ☐

d. $14+5=$ ☐

14. Subtract by counting on.

a. $18 - 15 =$ ☐ b. $12 - 9 =$ ☐ c. $20 - 18 =$ ☐

15. Subtract by counting back.

a. $15 - 2 =$ ☐ b. $17 - 3 =$ ☐ c. $12 - 2 =$ ☐

16. Think in tens when adding these. The first one is done for you.

$6 + 7 = 10 +$ [3] $=$ [13] b. $9 + 5 = 10 +$ ☐ $=$ ☐

a. $8 + 4 = 10 +$ ☐ $=$ ☐ c. $7 + 8 = 10 +$ ☐ $=$ ☐

17. Add.

a. $\begin{array}{r} 80 \\ +\ 17 \\ \hline \end{array}$

b. $\begin{array}{r} 73 \\ +\ 24 \\ \hline \end{array}$

c. $\begin{array}{r} 55 \\ +\ 34 \\ \hline \end{array}$

18. Subtract.

a. $\begin{array}{r} 57 \\ -\ 32 \\ \hline \end{array}$

b. $\begin{array}{r} 86 \\ -\ 42 \\ \hline \end{array}$

c. $\begin{array}{r} 92 \\ -\ 50 \\ \hline \end{array}$

19. Print the number sentence for each problem. Then print the answer in the box.

a. Sammy has 43 pictures in her album. Her sister has 26 pictures in her album. How many pictures do they have altogether?

_____

Sammy and her sister have ☐ pictures altogether.

b. Elena has 98 cents in her piggy bank. That is 37 cents more than Jasper has in his piggy bank. How much money does Jasper have in his piggy bank?

Jasper has ☐ cents in his piggy bank.

20. Solve these problems. Draw pictures to help you. Print the number sentence, including the addition or subtraction sign, and answer for each one.

a. Elena's friend Ashley has 37 toy cars. Elena has 19 more toy cars than Ashley. How many toy cars does Elena have?

☐ ☐ ☐ = ☐

Elena has ☐ toy cars.

b. There were 43 cows in the barn and 26 cows in the field. How many more cows were in the barn?

☐ ☐ ☐ = ☐

There were ☐ more cows in the barn.

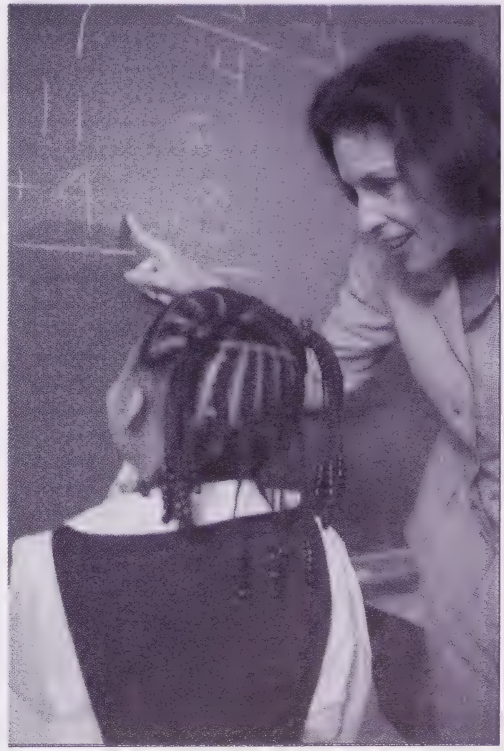
21. Estimate to get the answer. Show your work.

a. 59 + 22 _____ = about ☐

b. 73 – 27 _____ = about ☐

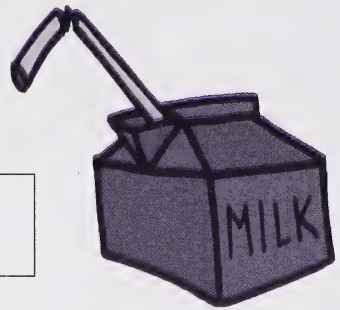
c. 38 + 13 _____ = about ☐

d. 66 – 37 _____ = about ☐



22. Estimate the answer for this problem.

Martha's mother gave her 92¢ to buy some milk. The milk costs 67¢. About how much money would Martha have left after she bought the milk?



Show your work and write a word sentence answer.

Print the number sentence. _____ = about ☐

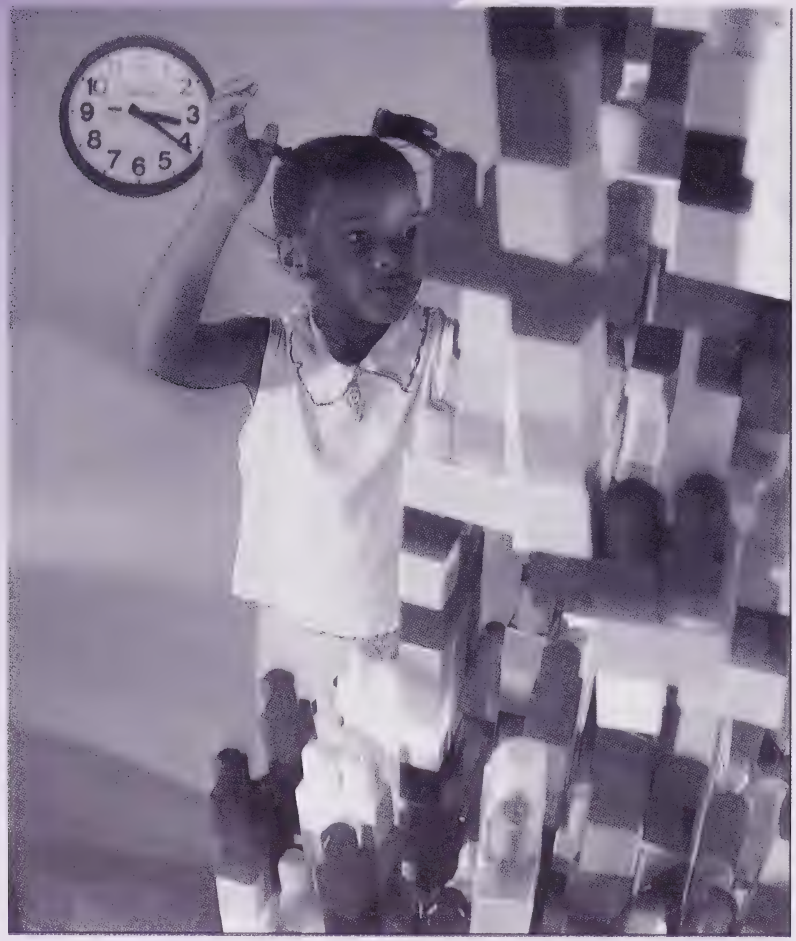
_____

_____

_____

_____

Day 2: Just a Minute



Has anyone ever told you to wait just a minute? How long did you wait?

Think of some things that take about a minute to do. Today you will estimate time in minutes.

See how much you can do in one minute.

Lesson 1

Elena and Jasper went on a fishing trip to Flin Flon, Manitoba. They were going fishing with Elena's cousin Nicole. On the first day of the fishing trip,Jasper was having a difficult time getting out of bed.

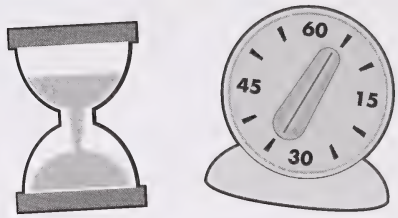
It was only six o'clock in the morning! Everyone was getting impatient to get to the lake and they were telling Jasper to hurry up. He yelled from his room, "Just give me a minute!" They waited and waited. When Jasper finally was ready, Elena said, "That was sure a long minute." Everyone laughed.

Have the student clap and count off each second to 60 while watching the timer. Watch the second hand of a watch or clock to ensure that you are counting seconds. Help the student see that there are 60 seconds in a minute.

Later that day while they were on the lake fishing, Jasper asked Elena why everyone had laughed. Elena told him that his minute was much longer than everyone else's.

Jasper and Elena decided to find out exactly how long a minute is when they got home. They asked their home instructor to help them.

Jasper and Elena's home instructor had them do this activity with a minute timer.



Watch the timer. Clap and count to 60 with your home instructor. Each time you clap and count, you are counting off one second. Do you know why you are counting to 60? Tell your home instructor.

Did the timer finish as you counted 60?

Just a Minute

There are ☐ seconds in one minute.

Why do you think a minute timer is called a minute timer?

Close your eyes. Say "one second" when you think one second has passed.

Was your estimate of one second a good one?

Circle  or  .

Was it **longer** or **shorter** than one second? Circle the answer.

Close your eyes again and estimate ten seconds. Say "ten seconds" when you think ten seconds have passed.

Was your estimate of ten seconds a good one?

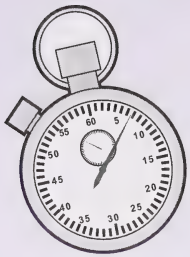
Circle  or  .

Was it **longer** or **shorter** than ten seconds? Circle the answer.

Discuss these activities with the student. Time each activity. Tell the student by how many seconds his or her estimate was off.

Have the student do each of these activities. Ensure that each one takes exactly one minute. If the student cannot do jumping jacks, he or she can clap hands, or do some other activity.

Discuss these questions with the student.



Lesson 2

These are the activities Elena and Jasper did to help them measure one minute. Try them with your home instructor.

- Put your head on your desk and close your eyes. Your home instructor will tell you when one minute has passed.
- Now sit up and your home instructor will read to you for one minute.
- Next, do jumping jacks, or some other activity, for one minute.

Think about the minutes when you did the activities. Talk to your home instructor about these questions. Did the minutes seem the same to you?

Think of some things that take about a minute to do. What are they?

Think of some things that take less than a minute to do. What are they?

Think of some things that take more than a minute to do. What are they?

Just a Minute

Discuss these activities with the student. Time one minute for each activity. Tell the student by how many seconds he or she was off the one-minute mark.

Close your eyes. Say "one minute" when you think one minute has passed.

Was your estimate of how long one minute is a good one?

Circle  or  .

Was it **longer** or **shorter** than one minute? Circle the answer.

Try it again. Were you closer to one minute this time?

Circle  or  .

Find out what you can do in one minute. Have your home instructor watch the dial or sand timer while you are doing each activity.

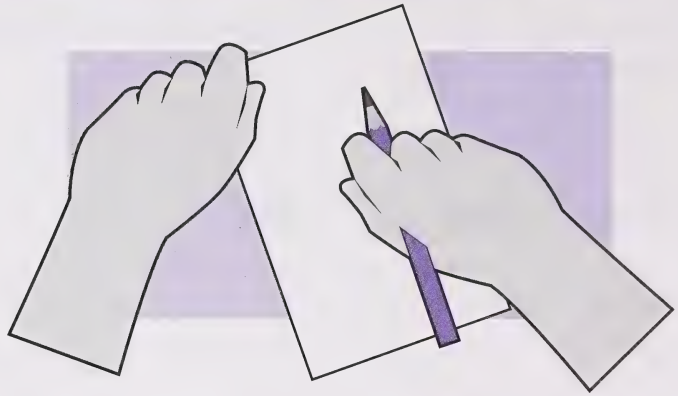
How far can you count? ☐

How many pages of a book can you read? ☐

How many times can you print your name? ☐

How many times can you print your age? ☐

How many times can you can say the alphabet? ☐



Choose a nursery rhyme you like. How many times can you say it? ☐

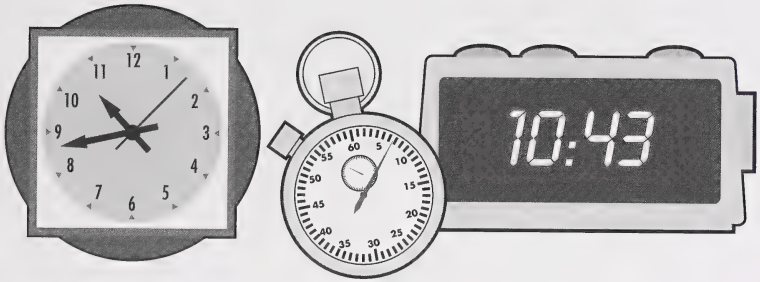
How many times can you can touch your toes? ☐

How far can you count backward from 100? ☐

Lesson 3

Take the Analog Clock out of your Student Folder.

You now have an idea of how long one minute lasts. Think of some ways to measure one minute.



Look at the clock. How can it help you know that one minute has passed?

Have the student show what a minute looks like on the clock. Show the markings and explain that each one signifies one minute.

Take out your interlocking cubes out of your Math Box.

Estimate how many cubes you can lock together in one minute. ☐

Just a Minute

Your home instructor will time you. You can start locking the cubes together now.

Count the number of cubes you locked together. ☐

Was your estimate a good one?

Circle yes or no.

Now get a piece of paper. You have one minute to draw a picture. Your home instructor will time you.

Was one minute enough time to draw a picture?

Put this drawing in your Student Folder.

For more practice working with minutes, go to the Extension Activities.

Day 3: Take Five

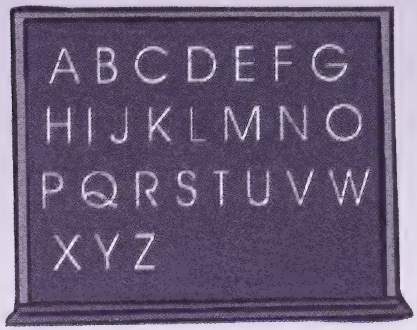
Now you know some things you can do in one minute. How much can you do in five minutes?

Which takes more time to do—counting to ten or eating an ice cream cone?

Today you will be timed to see about how much you can get done in five minutes.

Remember, if you work quickly, you get more done. If you work slowly, you get less done. When should you work quickly and when should you work slowly?

Discuss these activities and how many minutes they would take. Talk about the activities the student does not know about. If practical, have the student do the activities and time them.



Lesson 1

Elena and Jasper thought it would be fun to compare some activities to see which took longer or were faster to do.

1. Circle the ones you think take longer.

a. counting to 10	or	saying the alphabet
b. brushing your teeth	or	skipping to 100
c. setting the table	or	tying your shoelaces
d. making a sandwich	or	reading a book

2. Circle the ones you can do faster.

a. watch a movie	or	sing a song
b. do ten somersaults	or	run around the block
c. count forward to 20	or	count backward from 20
d. get dressed	or	wash the dishes

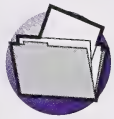
Think of a question about time to ask your home instructor. Ask which is slower, which takes less time, and which takes longer.

You know what the passing of one minute looks like on a clock, and you know what one minute passing by feels like.

You know the things you can do in one minute. What activities can you do in five minutes.

List some of these activities.

Lesson 2



Take the Analog Clock out of your Student Folder.

Help the student identify five minutes on the clock by looking at the markings. The student will count out five markings.

Look at the clock. Show what you think five minutes look like on the clock.

Have the student skip count by 5s to demonstrate that each number on the clock represents five minutes.

Do you remember how to skip count by 5s? Skip count by 5s to 60.

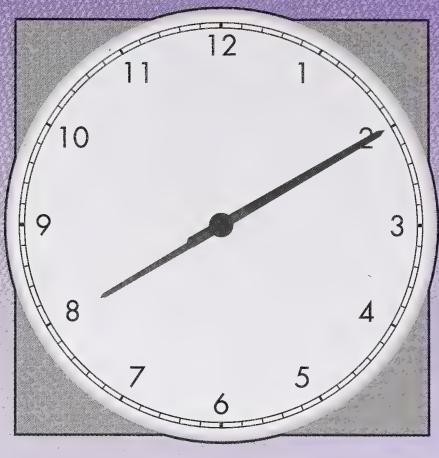
Get a piece of paper. Remember when your home instructor timed you drawing for one minute? This time, you have five minutes to draw a picture. Do you think that is enough time to draw a picture you would like?

Have the student begin drawing when the minute hand is on a multiple of five (5, 10, 15, and so on, after or to the hour).

Your home instructor will time you. Look at a real clock just before you begin drawing to see where the minute hand is.

You have now drawn a picture. Look at the clock. Point and count the five minutes on the clock that have passed since you started to draw.

Were five minutes enough time to draw a picture?



Get the drawing you did in one minute out of your Student Folder.

Compare this drawing with the one you drew in five minutes. Is there a difference? Which one was better, the one you drew in one minute or the one you drew in five minutes?

Lesson 3

Estimate the number of minutes you need to do these activities. Then do the activities and write the actual number of minutes the activity took.

How will you check your estimates?

Activity	Estimate in Minutes	Actual Number of Minutes
putting on your shoes and tying the shoelaces		
walking to the bathroom and back		
making your bed		
reading a letter		
drinking a glass of something you like		
jumping up and down 20 times		
writing your name five times		
counting to 60		
writing the alphabet		
jumping up and down 60 times		

Were your predictions of the time it would take to do these correct? Circle  or  .

What took more time than you thought? What took less time?

How many minutes do you think today's math class took? ☐

Ask your home instructor how long it took.

Did you make a good estimate? Circle  or  .

Did the class take **more** or **less** time than you thought? Circle the answer.

By how many minutes were you off? ☐

Write the equation ☐ ☐ ☐ = ☐

For more practice working with five minute intervals, go to the Extension Activities.

Day 4: Hours of Fun

Like Jasper and Elena, you will be working with longer times today.

You will learn what a clock looks like and how to measure the time in minutes and hours.

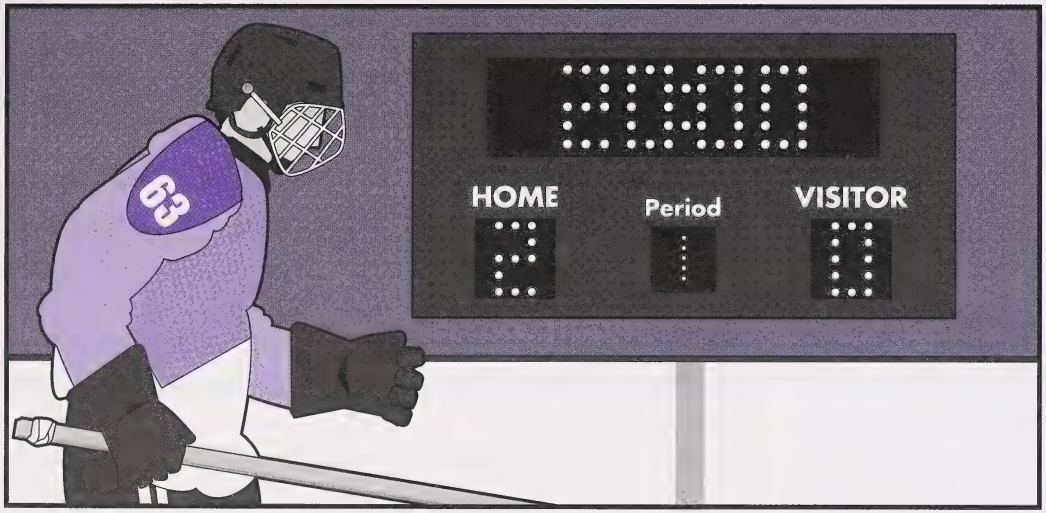
You will see how the things you do in a day fit on a time line.

How long do you think today's mathematics work will take you?

Lesson 1

Jasper and Elena were enjoying learning about measuring time. They now knew that there were 60 seconds in a minute. They also knew the things they could do in one minute, five minutes, ten minutes, and even 60 minutes.

Elena can write a story in 45 minutes. Jasper's hockey team can play one period of hockey in 20 minutes. Elena's favourite TV program is 30 minutes long. Jasper can read a book in 50 minutes.



Hours of Fun

Day 4

Elena told Jasper that she read an entire book last night and it only took her 70 minutes. They both wondered how many minutes there had to be before you say one hour. Can you say something took you 100 minutes? They asked their home instructor.

Their home instructor asked them how long they took for lunch during the school week. Jasper said he wasn't sure, but he knew it was called the *lunch hour*.

How long do you think Jasper and Elena take for lunch?

_____

Jasper decided to time his lunch hour. That day he counted the number of minutes that he takes for lunch. Do you know how many minutes he counted?

Jasper counted 60 minutes. Jasper told Elena that he knew what an hour was. He told her an hour has 60 minutes and that's the time he takes for lunch.

Now Elena and Jasper know that one hour has 60 minutes.

The answer is one hour. Tell the student that is why it is called a *lunch hour*.

Hours of Fun

Set your timer now for one hour. When the hour has passed, you will talk about it with your home instructor. If you do not have an hour timer, make sure to check the clock every once in a while. Your home instructor will tell you when one hour has passed.

Jasper and Elena know they can do many things in one hour. They can read, do their homework, go swimming, watch TV, play with their friends, and do other things.

What are some things you can do in one hour?

Lesson 2

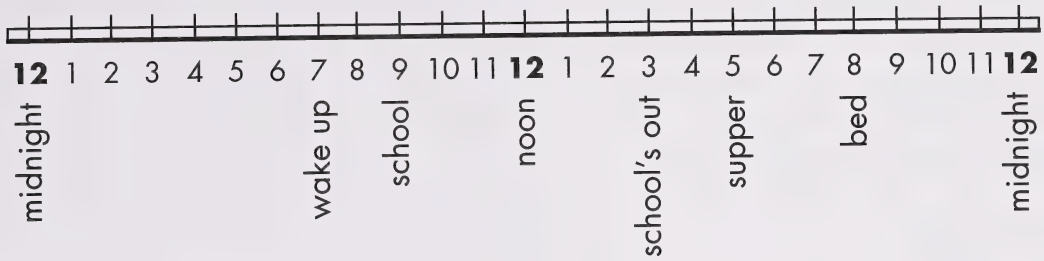
Some things take longer than one hour to do. Some things take two, three, or more hours.

Elena watched a movie last night that lasted two hours. Jasper timed how long he sleeps at night and found out he sleeps ten hours. Elena and Jasper watched the Edmonton Oilers play the Montreal Canadians in a hockey game that lasted three hours.

Hours of Fun

Day 4

What are the things you do every day? How long do they take?



This is called a time line. It's a line with all the hours of one day on it. The day starts at 12:00 at night, which is also called midnight. Count the number of hours on the time line. There are 24 hours in one day.

Mark the following times on the time line.

What time do you usually wake up? _____

What time does school start? _____

What time does school end in the morning for lunch? _____
Another name for 12:00 during the day is noon.

What time do you go back to school after lunch? _____

What time does school end? _____

What time do you have supper? _____

What time do you go to bed? _____

What are some of the things you do when it's not a school day? What do you do on Saturday? Draw your day. Print the times and the activity in the box. An example has been done for you.

8:00 get up 	_____ _____	_____ _____	_____ _____	_____ _____
_____ _____	_____ _____	_____ _____	_____ _____	_____ _____

Hours of Fun

Show the student what an hour looks like on the clock. Explain that the time it takes for the big hand to go completely around is one hour. Go over the questions with the student and discuss the responses.

Lesson 3

Take your Analog Clock out of your Student Folder.

1. a. What numbers are on the clock?

_____

b. In what direction do they go?

_____

c. How many lines are between the numbers?

_____

d. How many hands are there?

_____

e. How are they alike?

_____

f. How are they different?

_____

g. Which hand shows minutes?

_____

h. Which hand shows the hour?

_____

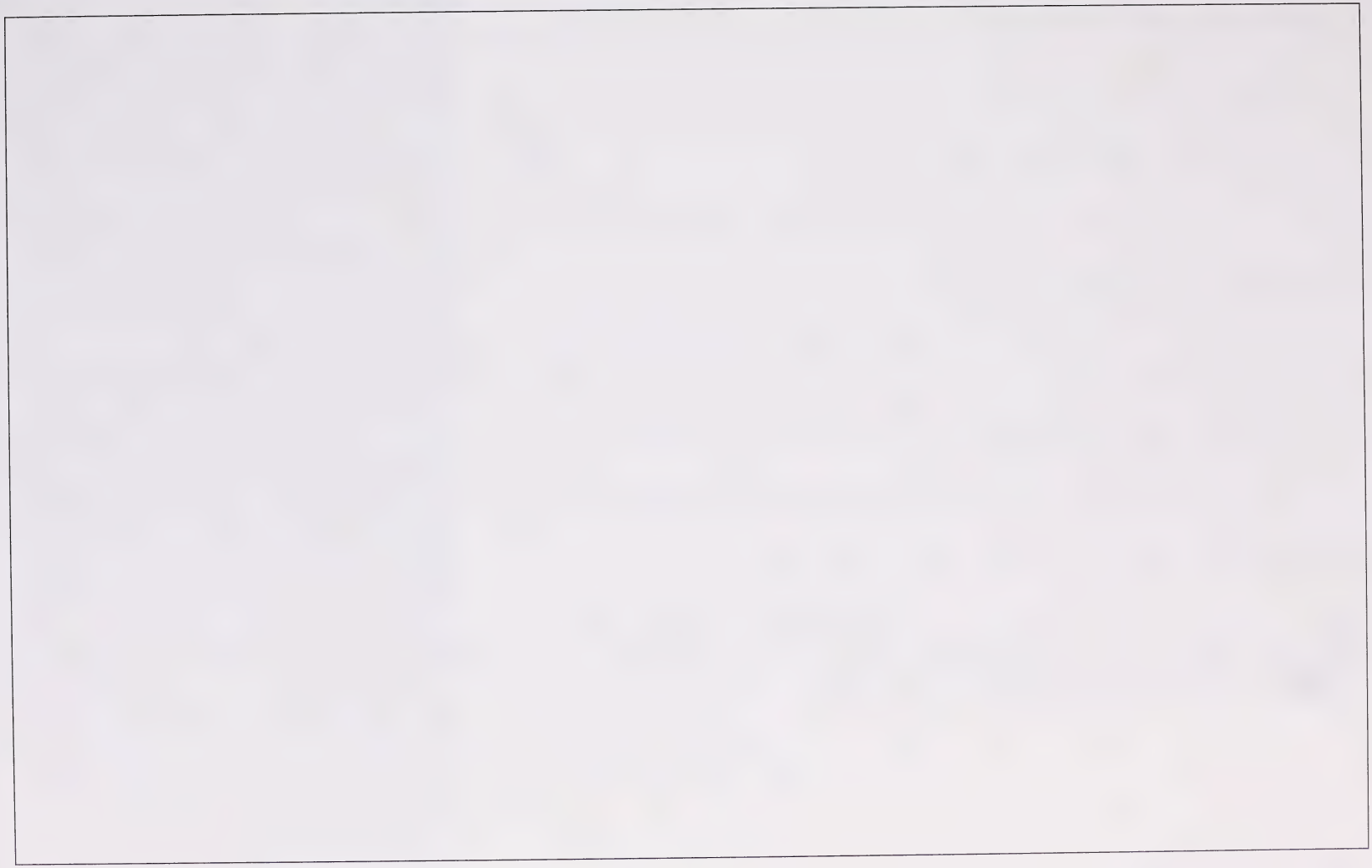
i. How can the clock help you know that one hour has passed?

_____

Now put your clock away in your Student Folder.

In the box on the next page, draw a clock face from memory. Do not look at any clocks.

Ensure the student does not look at any clock or watch.



2. Answer these questions.

a. What shape is your clock? _____

b. Where did you put the number 12? _____

c. Where did you put the number 6? _____

d. How many hands did you draw? ☐

e. Were the hands the same length? Circle  or  .

f. What do the marks around the clock mean? _____

g. How many marks are there? ☐

h. Why are there that many? _____

_____

i. What does the longer hand tell you? _____

j. What does the shorter hand tell you? _____

k. Which hand moves faster? _____

l. Why does the shorter, or hour hand, move slower? _____

m. How many minutes are in an hour? ☐

n. How many hours are shown on a clock? ☐

For more practice working with one hour, go to the Extension Activities.

Day 5: How Do You Spend Your Time?

What is your favourite time of the day? What are you doing at that time of day? How long do you spend doing that activity?

You will use different units of time today. These units of time are used to measure how long different activities take.

Lesson 1

You now have an idea of how much time one minute and one hour is. You know what it feels like when a minute passes and when an hour passes. You know the things you can do in one minute, ten minutes, one hour, two hours, and ten hours.

Minutes measure the passage of time. Something that measures the passage of time is called a **time unit**. It is the unit used for measuring time. A minute is a time unit.

Name another time unit. _____

Hours measure the passage of time, too. An hour is a time unit. Which time unit measures a longer passage of time, an hour or a minute?

_____

How many minutes are in one hour? ☐

How Do You Spend Your Time?

Which time unit is used to measure shorter activities?

_____

Which time unit is used to measure longer activities?

_____

When time is measured, minutes are used for shorter activities and hours are used for longer activities.

1. Underline the unit of time you would use to measure the following activities. Discuss with your home instructor why you chose the unit you did.

Have the student explain why he or she chose the unit of time.

a. the time spent sleeping on the weekend	minutes	hours
b. the time it takes to eat breakfast	minutes	hours
c. the time it takes to drink a glass of milk	minutes	hours
d. the time it takes to watch a movie	minutes	hours
e. the time it takes to watch a cartoon	minutes	hours
f. the time spent in school	minutes	hours

2. Circle in red the unit you would use to measure the following activities.

a. sleeping at night	minutes	hours
b. watching a football game	minutes	hours
c. brushing your teeth	minutes	hours
d. singing a song	minutes	hours
e. playing a game of soccer	minutes	hours
f. counting to 100	minutes	hours
g. reading one page in a book	minutes	hours
h. washing your hands	minutes	hours
i. watching two movies	minutes	hours

Lesson 2

You know how to measure the passage of time in time units, such as minutes and hours. In this activity, you will think of different things that happen during the day and when they happen.

How Do You Spend Your Time?

What are four of your favourite times during the day? In the boxes, draw pictures of what you do at these times. Print about how many minutes or hours the activity lasts.

_____	_____
_____	_____

You will do the activities from the next chart today and tomorrow. Estimate the number of hours you think you spend on each of the activities. After you do the activity, measure the actual number of hours spent on each of them. On Day 8, you will look at the chart again to compare your estimates with the actual number of hours. This will give you enough time to record the actual number of hours of your activities.

How Do You Spend Your Time? Day 5

Go over the chart and discuss the activity with the student. Discuss how the student will measure the passage of time to check the estimates.

How will you check your estimates? _____

Activity	Estimate in Hours	Actual Number of Hours
number of hours you sleep in one night		
number of hours you spent in school in the morning		
number of hours spent in school in the afternoon		
total number of hours spent in school		
number of hours spent watching TV in one evening		
number of hours between supper and bedtime		

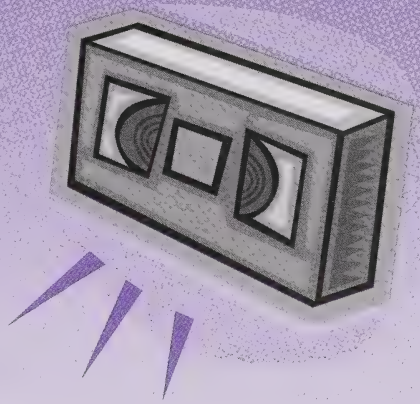
Go to Assignment Booklet 5A.

Day 6: How Much Time Do You Have?

Do you have enough time in one day to do the things you really like to do?

What would you like to spend more time doing?

Today you will check to see how many minutes there are in two or three hours. You will also work with how many hours there are in a day.



Lesson 1

Jasper rented a movie from the video store. He wanted to know how long the movie was. The box cover said the movie was 90 minutes long. Jasper knew that was longer than one hour, but he wondered if that was more or less than two hours. What do you think?

One hour equals how many minutes? ☐

Jasper needs to know how many minutes are in two hours. Jasper's home instructor helped him add the numbers. Although Jasper hadn't done addition over 100 yet, his home instructor helped him with this addition.

If one hour equals 60 minutes, then two hours must be $60 + 60$.

This is how Jasper's home instructor did the addition.

$$\begin{array}{r} 60 \\ +\ 60 \\ \hline 120 \end{array}$$

Jasper saw that this wasn't so difficult after all. Now he knew that two hours are equal to 120 minutes. Now you know, too.

Show how to add $0+0$, then $6+6$.

How Much Time Do You Have?

One hour equals ☐ minutes.

Two hours equal ☐ minutes.

Answer Jasper's question.

Is 90 minutes **more** or **less** than two hours?

Circle the answer.

You know one hour equals 60 minutes and two hours equal 120 minutes. How many minutes equal three hours?

This is one way of adding three hours. $60 + 60 + 60 =$ ☐

Show how to add $0 + 0 + 0$ and $6 + 6 + 6$.

How many minutes are in three hours? Try it.

$$\begin{array}{r} 60 \\ 60 \\ +\ 60 \\ \hline \end{array}$$

How Much Time Do You Have?

One hour equals ☐ minutes. Two hours equal ☐ minutes. Three hours equal ☐ minutes.

one hour = 60 minutes
two hours = 120 minutes
three hours = 180 minutes

60 minutes = one hour
120 minutes = two hours
180 minutes = three hours

1. How many minutes are there in three hours? ☐

2. Elena read a book in 50 minutes. Is that **more** or **less** than one hour? Circle the answer.

3. Elena played field hockey with her friends for 110 minutes.

   Is that **more** or **less** than two hours? Circle the answer.

4. Jasper's father asked him to work at a craft sale for two hours.

   How many minutes will Jasper work? ☐

5. Jasper and Elena watched the movie *Toy Story* for a total of 180 minutes.

How many hours did they watch the movie? ☐

Lesson 2

Take the Analog Clock out of your Student Folder.

Remember when you were learning about the hour hand on the clock? Look at your clock.

Which hand is the hour hand? _____

How many hours does it take for the hour hand to go all around the clock? ☐

There are 24 hours in a day.

If there are 24 hours in a day, how many times does the hour hand go around the clock in one day? ☐

How Much Time Do You Have?

The amount of time it takes the hour hand to go around the clock twice is 24 hours.

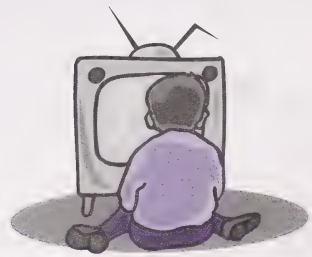
1. How many hours are in a day? ☐

2. You sleep about ten hours at night. Is that **more** or **less** than one full day? Circle the answer.

3. Murray's dog Scooter just had puppies. They are two days old. How many hours old are they? ☐

4. Sarita reads every night for one hour. How many nights will she have to read to make one full day of reading? ☐

5. If you watched TV for 50 hours in one week, about how many full days of watching TV did you do? ☐



How Much Time Do You Have?

List what you normally do in 24 hours.

Brainstorm with the student what he or she does in a 24-hour time period. Have the student list the activities.

For more practice working with hours, go to the Extension Activities.

Go to Assignment Booklet 5A.

Day 7: It's a Date

You already know a calendar is an important tool. Today you will use what you already know about calendars, as well as learn some new things.

For some activities, you will look at a calendar. For others, you will try to do them without looking at a calendar.

Lesson 1

Elena came into the kitchen one morning just as her mother was flipping a page over on the wall calendar. Elena asked what she was doing. Her mother replied that it was a new month starting today and it was time to change the calendar. Elena became curious about calendars and wanted to know more about them.

The next day, Elena asked her home instructor to teach her about calendars.

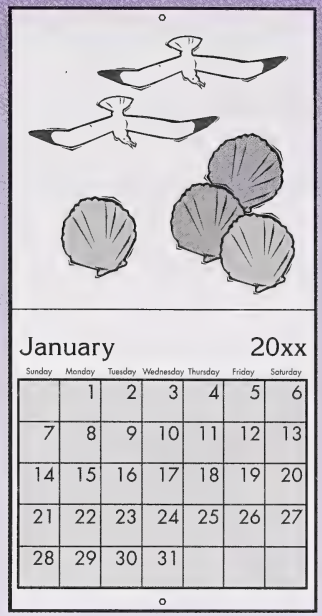
Your home instructor will have a calendar ready for today's lessons.

Look at your calendar. What are some things you know about calendars already?

Elena's home instructor told her that each calendar page usually shows one month at a time. Do you know how many months there are in a year?

Look through your calendar and count the months.

How many are there? ☐



Take out a calender for today's lesson. Let the student tell you everything he or she knows about calendars.

It's a Date

Look through the calendar again. This time, say the name of each month.

Fill in the names of the months.

The first month of the year is _____.

The second month of the year is _____.

The third month of the year is _____.

The fourth month of the year is _____.

The fifth month of the year is _____.

The sixth month of the year is _____.

The seventh month of the year is _____.

The eighth month of the year is _____.

The ninth month of the year is _____.

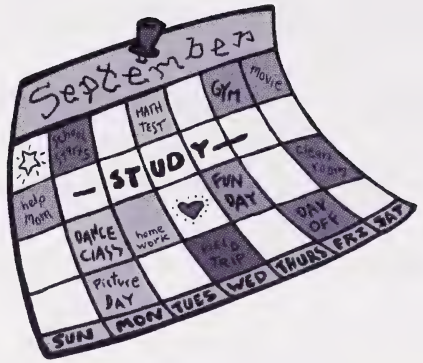
The tenth month of the year is _____.

The eleventh month of the year is _____.

The twelfth month of the year is _____.

Draw a line to match each month to the word that tells which order it comes each year. The first one is done as an example.

January	fifth
February	third
March	twelfth
April	first
May	eighth
June	ninth
July	second
August	eleventh
September	fourth
October	tenth
November	seventh
December	sixth



It's a Date

Without looking at a calendar or in this booklet, name the twelve months of the year.

See if you can answer these questions without using a calendar.

Which month are you in now? _____

Which month comes after April? _____

Which month comes before November? _____

Which month is your birthday? _____

Which month comes before your birthday? _____

Which month comes after your birthday? _____

Which is the month before you start school? _____

Which is the month before summer vacation begins? _____

Which month comes between June and August? _____

Are you sure each answer is correct, or do you need to use a calendar to check?

Lesson 2

1. How many months are in a year? ☐

Do you know how many days there are in a month? Circle 

or 

.

Were you a little confused by the last question?

Can you say there are a certain number of days in a month? Circle 

or 

.
Why or why not?

2. Look through your calendar and print the number of days in each month.

a. January _____ g. July _____

b. February _____ h. August _____

c. March _____ i. September _____

d. April _____ j. October _____

e. May _____ k. November _____

f. June _____ l. December _____

3. What are the three different numbers you found?

4. What do the months April, June, September, and November have in common?

_____

_____

5. Which months have 31 days?

_____

_____ _____

_____ _____

_____ _____

6. Which month has a different number of days? _____

Here is a rhyme that you can learn about the months of the year.

Thirty days has September,
April, June, and November.
All the rest have thirty-one.
Except February alone,
Which has but twenty-eight days clear,
And twenty-nine in each leap year.

February has 28 days for three years in a row. On a leap year, which comes every four years, one day is added to February. So February has 29 days every four years.

Lesson 3

Elena was enjoying learning about the calendar. Her home instructor asked her a riddle.

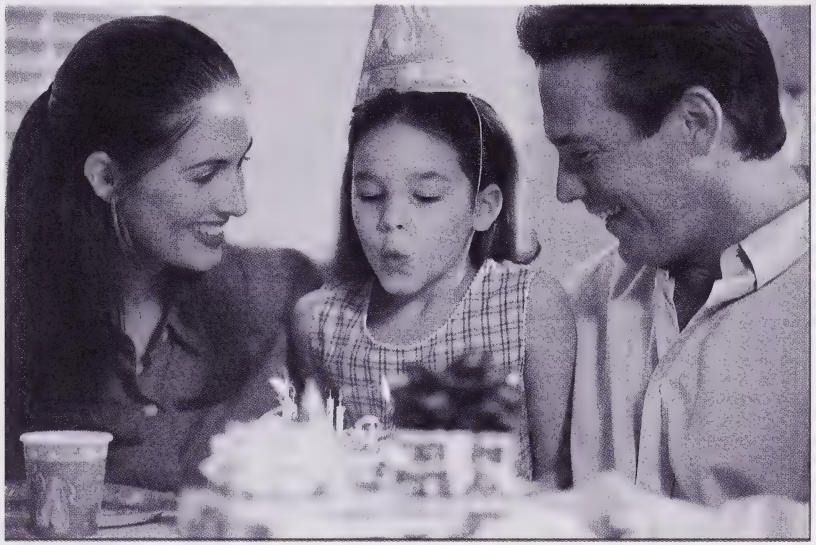
This birthday is in the fifth month. It is on a Friday this year. It is a single-digit number that is more than two. When is the birthday?

Can you answer the riddle? What is the date of the birthday?

_____

Assist the student as necessary with these activities. Explain that a single-digit number is one number, for example, the number 8.

Elena was surprised. It was her own birthday!



Look at your calendar and find the day of the week these dates occur:

- November 8 _____
- March 19 _____
- December 22 _____
- April 30 _____

- July 5 _____
- September 23 _____
- June 9 _____
- February 13 _____

Using your calendar, find the date for these days.

- the 2nd Thursday of January _____
- the 4th Wednesday of October _____
- the 1st Monday of May _____
- the 3rd Sunday of April _____
- the 5th Tuesday of any month _____
- the 1st Friday of August _____
- the 2nd Saturday of June _____
- the 3rd Wednesday of February _____

Fill in the dates on the calendar. Then follow the instructions below.

AUGUST

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3

- Colour the third Wednesday blue.
- Colour the fifth Saturday green.
- Colour the second Sunday yellow.
- Colour the fourth Tuesday pink.
- Colour the fourth Thursday orange.
- Colour the first Monday red.
- Colour the third Friday purple.

Answer the questions about this calendar.

OCTOBER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

1. What month is it? _____

2. What day of the week is October 19? _____

3. What day of the week is October 4? _____

4. What day of the week is October 13? _____

5. What day of the week is October 22? _____

6. What day of the week is October 31? _____

7. What day of the week is October 28? _____

8. What day of the week is October 23? _____

9. List the dates of every Tuesday. _____

10. List the dates of every Saturday. _____

For more practice in working with months, go to the Extension Activities.

Go to Assignment Booklet 5A.

Day 8: It's That Time Again

It's time to use all the things you have been learning about time and calendars.

You will write equations and solve problems about time.

Are you ready to use your new skills?

Lesson 1

It's time to look at the chart from Day 5. Go back to it now.

Compare the actual hours to your estimates.

Were your estimates of the time it would take to do these activities good ones?

Circle 

or 

.

What took more time than you thought? _____

_____

What took less time? _____

_____

How did you check the actual number of hours the activities took? _____

_____

Lesson 2

Without looking at the calendar, say the days of the week.

How many days are in one week? ☐

Print the days of the week in order.

_____

_____

_____

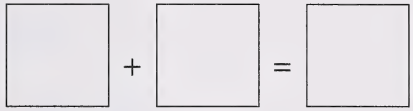
_____

_____

_____

_____

1. a. How many days are in two weeks? Write the equation to help you answer this question.

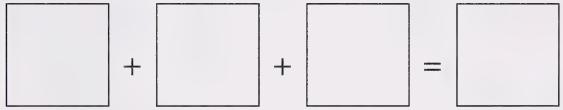


b. How many days are there in two weeks? 

Now that you know there are 14 days in two weeks, how can you figure out how many days there are in three, four, five, and six weeks?

The student should answer that adding 7 twice, then three times, then four times, and so on, will give the number of days in two, three, and four weeks.

c. Write the equation to find the number of days in three weeks.



d. Write the equation to find the number of days in four weeks.

It's That Time Again

2. Write the equations to help you answer the following questions. Explain to your home instructor what you did.

   a. Jorge says it is four weeks until he's going fishing with his grandfather. How many days is it until the fishing trip?

   _____

   b. In three weeks and four days it will be Jasper's birthday. How many days is it until his birthday?

   _____

   c. There are exactly four weeks in this month. Which month is it?

   _____

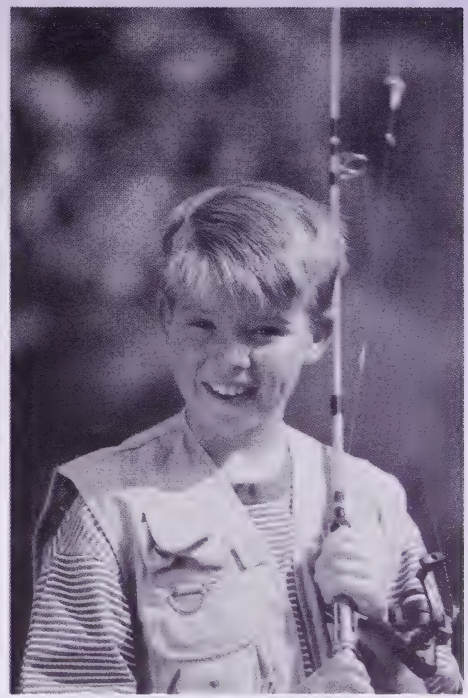
   How many days are there in this month?

   _____

   d. Sandy's cousin came to visit for two weeks and five days last summer. How many days did Sandy's cousin stay with her?

   _____

For question c., if it is a leap year, remind the student that February usually has 28 days.



e. Philipa sent her uncle, who lives in Portugal, a package by mail. It took five weeks and one day to get to him. How many days did it take the package to get to him?

_____

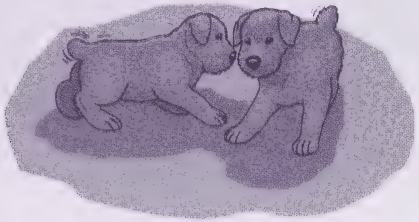
f. Stefan's neighbour went on a holiday several months ago. He was away for six weeks. For how many days was Stefan's neighbour away?

_____

g. Maureen was sick in bed for one week and six days last month. How many days was she sick in bed?

_____

That's almost ☐ weeks.



h. Harry's puppies are two weeks and two days old. How many days old are the puppies?

_____

Lesson 3

How many months are there in one year? ☐

How many months are there in half a year? ☐

How many months are there in two years? Write the equation to help you answer this question.

☐ + ☐ = ☐

How many months are there in one year? ☐

How many months are there in two years? ☐

Now that you know there are 24 months in two years, how can you figure out how many months there are in three, four, five, and six years?

The student should answer that 12 needs to be added twice, then three times, four times, five times, and so on. They might also recognize that by adding 12 to 24, you get the number of months in three years and by adding 12 to 36, you get the number of months in four years, and so on.

1. a. Write the equation to find the number of months in three years.

☐ + ☐ + ☐ = ☐

b. Write the equation to find the number of months in four years.

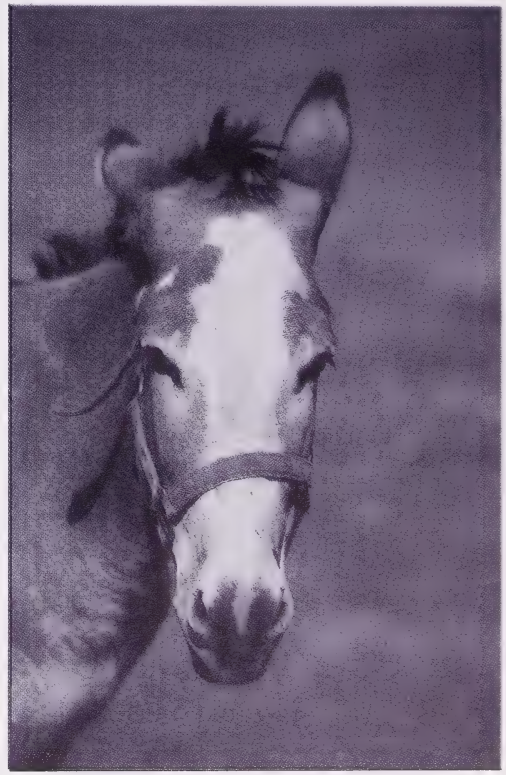
☐ + ☐ + ☐ + ☐ = ☐

c. Write the equation to find the number of months in five years.

☐ + ☐ + ☐ + ☐ + ☐ = ☐

d. Write the equation to find the number of months in six years.

☐ + ☐ + ☐ + ☐ + ☐ + ☐ = ☐



2. How old is Elena's horse if he is a half year old? _____

3. Write the equation to help you answer the following questions. Explain to your home instructor what you did.

a. Brandy's sister is two years old. How many months has it been since she was born?

_____

b. T.J.'s brother has been married for two years and four months. How many months has his brother been married?

_____

c. In four years and six months, Rosie will be 13 years old. In how many months will Rosie be 13 years old?

_____

d. Peter has lived in Winnipeg for six years. How many months has he lived in Winnipeg?

_____

e. Murray's cat ran away three years and ten months ago. How many months has it been since his cat ran away?

_____

f. Jasper is two-and-one-half years younger than his sister. How many months younger is Jasper than his sister?

_____

g. Gary's parents promised to buy him a bicycle when he turned nine. He will turn nine in one year and two months. How many months does Gary have to wait to get his bicycle?

_____

For more practice with using days, weeks, months, and years to measure time, go to the Extension Activities.

Go to Assignment Booklet 5A.

Day 9: Looking at Patterns

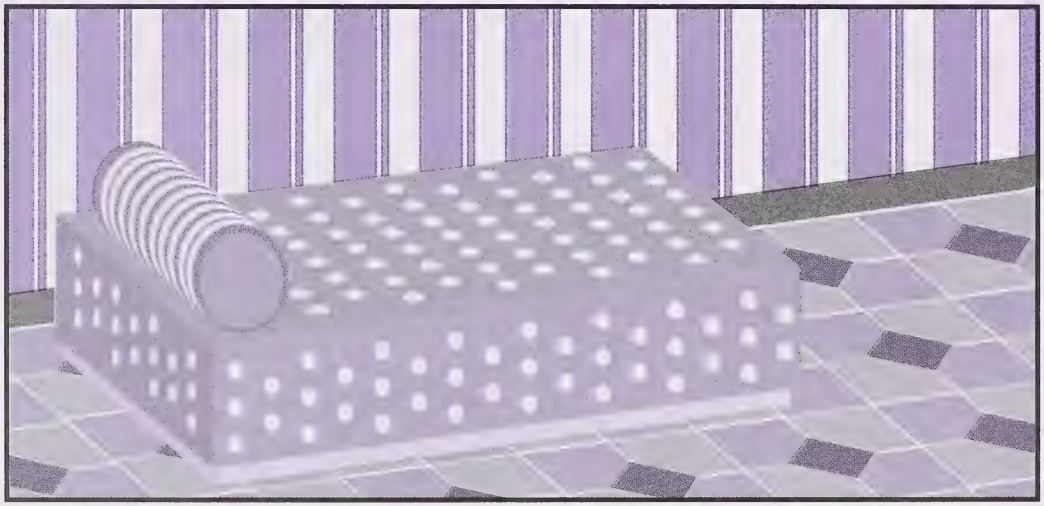
Colours and shapes are all around you. Do you have a favourite colour? Do you have a favourite shape?

Today you will find out what happens when things such as colours and shapes repeat themselves. You will even do some drawing.

Are you ready? Let's begin.

Lesson 1

Did you ever notice how some things repeat themselves? Look at the curtains, bedspreads, quilts, and tablecloths in your home. Do you have wallpaper, or gift wrap at home? What about the tiles on the floor? Do you notice how the colours and pictures on all these things are the same over and over again? You know what that is. That's a pattern.



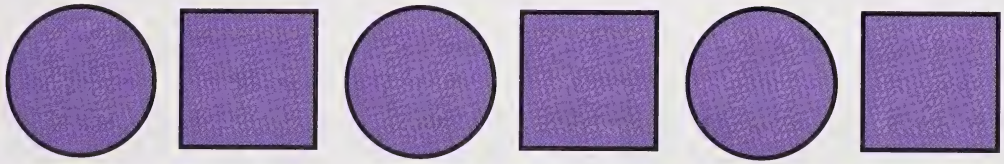
For the rest of this module, you will be looking at, naming, and making your own patterns.

Patterns are all around you. You just have to look for them and you will find them.

Looking at Patterns

Lesson 2

Look at this pattern.



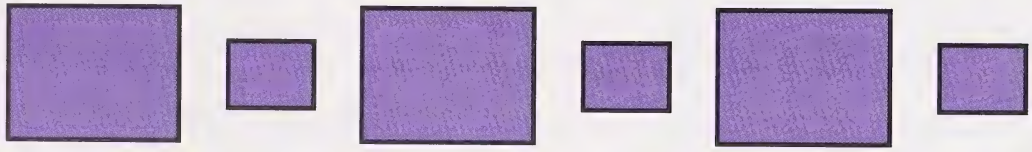
Describe the pattern.

The student should answer circle, square, circle, square. Help the student recognize a pattern is something that repeats or goes over and over. Help the student identify patterns.

What do you think a pattern is?

Take a look around you. Look at your surroundings, your clothes, the books, and everything in the room you are in. Talk about the patterns you see.

Describe this pattern.



The pattern is big rectangle, small rectangle, big rectangle, small rectangle.

The pattern is one cube, two cubes, one cube, two cubes.

Describe this pattern.

The pattern is two rectangles, one rectangle, two rectangles, one rectangle.

Describe this pattern.

Draw or print the missing piece to complete each pattern.

1. a. 

b. Describe the pattern. _____

_____

Tell the student that words can make patterns, too.

2. a. snap clap snap _____ snap clap

b. Describe the pattern. _____

_____

3. a.  ____ ★★

b. Describe the pattern. _____

_____

4. a. hop jump hop jump hop _____ hop jump

b. Describe the pattern. _____

_____

5. a.  ____

b. Describe the pattern. _____

_____

6. a. kick squat kick _____ kick squat

b. Describe the pattern. _____

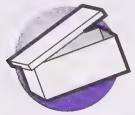
_____

Looking at Patterns

Day 9

Think of some word patterns on your own. Print them here.

- _____
- _____
- _____
- _____



Choose manipulatives from the Math Box to make a pattern.

Make a pattern with the manipulatives. When you finish, describe the pattern to your home instructor. Draw your pattern here.

Ensure the student understands what a pattern is.

Looking at Patterns

Using the same objects, make a second, different pattern from the one you just made and describe it. Draw your pattern here.

Lesson 3

You can have some fun with the two patterns you just created. You will be making sounds and body actions to go with each pattern. Your home instructor will tell you how to do this.

Continue with this exercise as described in the Home Instructor's Guide.

Copy your first pattern using sounds. Show what sounds you can use.

Copy your first pattern using actions. Show what actions you can use.

Copy your second pattern using sounds. Show what sounds you can use.

Copy your second pattern using actions. Show what actions you can use.

Lesson 4

Remember the two patterns you made using manipulatives from your Math Box in Lesson 2. You will draw pictures to show the pattern. This is Jasper's pattern and the pictures he drew. This is how he described his pattern: two rectangles, one triangle, two rectangles, one triangle, two rectangles, one triangle.

He drew two apples, one orange, two apples, one orange, two apples, one orange to show his pattern.

Now you get to draw pictures of your patterns.

Describe your first pattern. _____

_____

Looking at Patterns

Draw pictures to show the pattern.

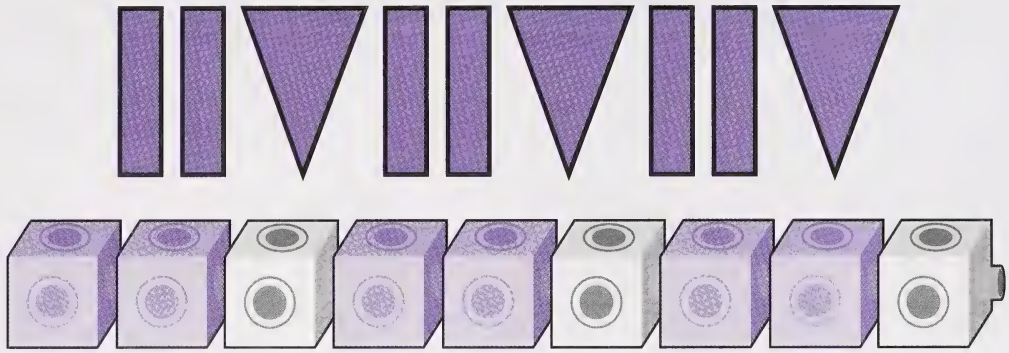
Describe your second pattern. _____

_____

Draw pictures to show the pattern.

Take your interlocking cubes out of your Math Box.

Now you will show how your patterns look as interlocking cubes. Look at Jasper's pattern again. See how he put the cubes together to show the pattern. He first described his pattern as two rectangles, one triangle, two rectangles, one triangle, two rectangles, one triangle.



Describe your first pattern. _____

_____

Draw the cubes in your first pattern. Colour them to show the pattern.

Describe your second pattern. _____

_____

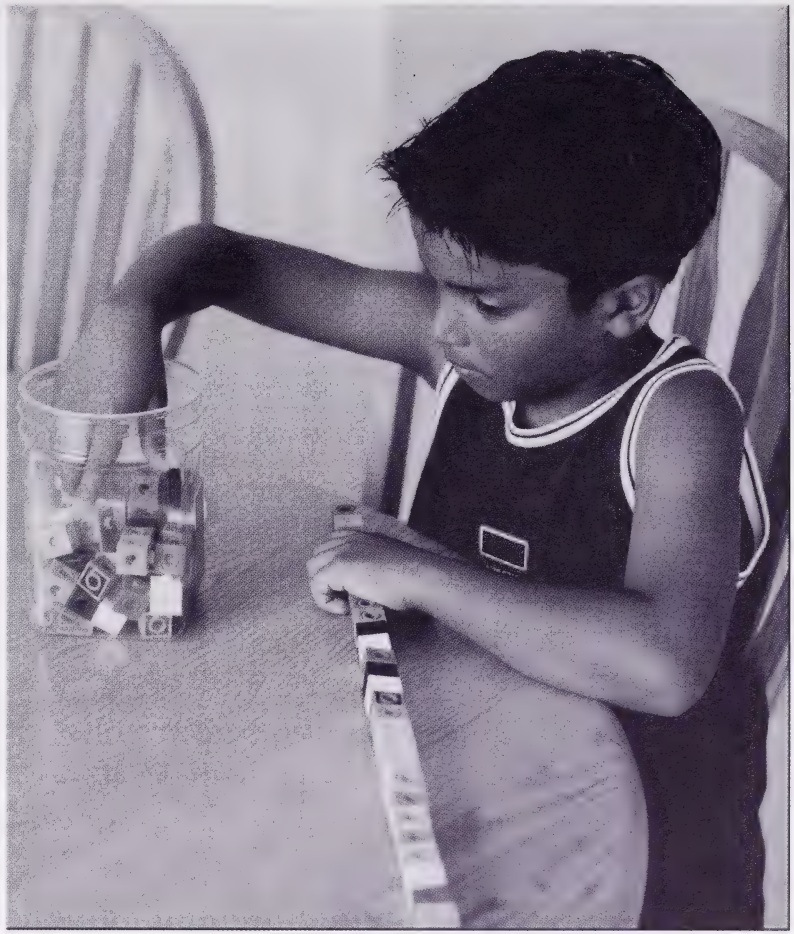
Draw the cubes in your second pattern. Colour them to show the pattern.

Looking at Patterns

Make other patterns with your interlocking cubes. See how many different patterns you can make. Make sure you repeat the colours over and over again to make true patterns.

For more practice identifying, describing, creating, extending, and translating patterns, go to the Extension Activities.

Go to Assignment Booklet 5A.



Day 10: Over and Over Again

Have you ever strung different beads on a string? If you have, you were making a pattern.

Jasper and Elena will share some of their patterns with you today. You will be looking at some long patterns to see how they work.

You will show patterns in different ways.

Over and Over Again

Lesson 1

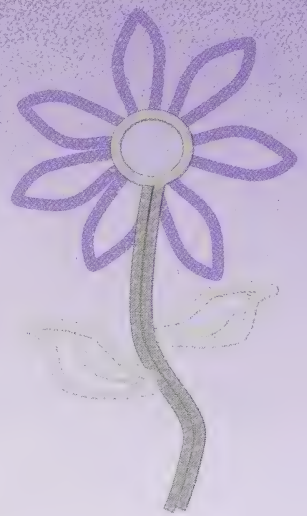
Describe this pattern.

This is a long pattern to have to describe. Do you really want to have to say every single piece of this pattern? There is a simpler way of doing it. Can you think what that could be?

When you have a long pattern, you don't need to say each part of the pattern to describe it. You only need to say what the **stem** is. The stem is the smallest part of the pattern. Do you know another meaning for the word *stem*? Why do you think the smallest part of a pattern is called a stem?

Can you tell which is the stem in this pattern?

The stem is circle, square, square. Why is it the stem? Tell your home instructor.



The answer is circle, square, square, which repeats over and over again.

1. What is the stem in this pattern?

2. Jasper and Elena were having fun making patterns. These are some of the patterns they created using beads and string. What is the smallest part, or stem, of each pattern?

a. 

b. 

c. 

Over and Over Again

Lesson 2

Jasper and Elena wanted to make different patterns.

Here is one pattern Elena made.

Describe the pattern (just write the stem).

The stem is star, moon, star, star, moon. When a description of the pattern is called for now, have the student print just the stem. Ensure the student can identify what the pattern is.

This is the pattern Jasper made.

Describe the pattern Jasper made.

The stem for Jasper's pattern is happy, sad, angry.

Refer to the Home Instructor's Guide for examples.

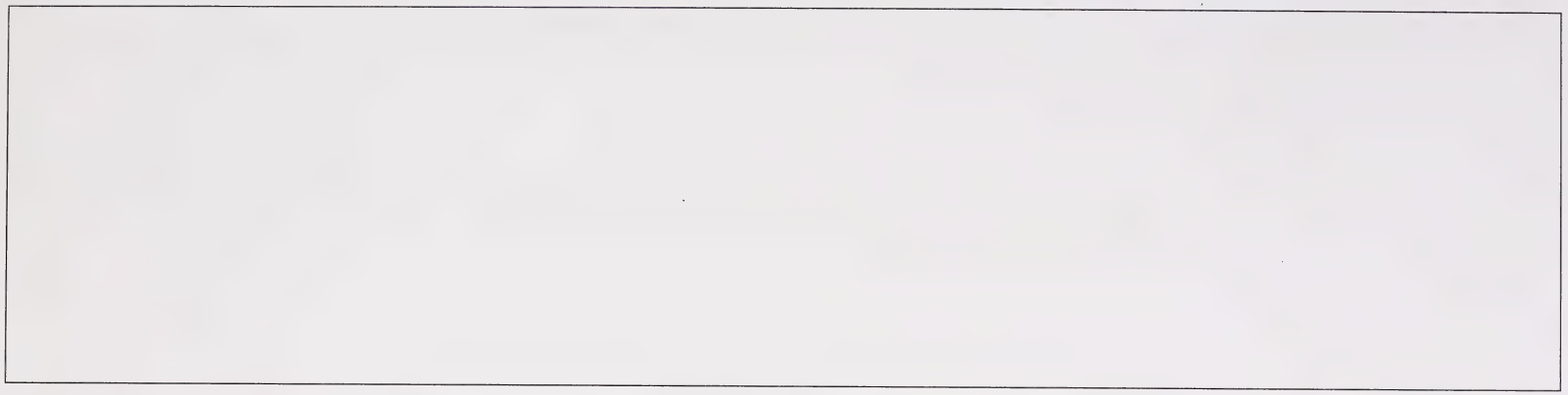
Elena's Pattern

Copy Elena's pattern using sounds, actions, pictures, and interlocking cubes.

Show what sounds you can use.

Show what actions you can use.

Show what pictures you can use.



Now make the pattern with your cubes.
Draw the cubes and colour them.

Jasper's Pattern

Copy Jasper's pattern using sounds, actions, pictures, and interlocking cubes.

Show what sounds you can use.

Show what actions you can use.

Show what pictures you can use.

Now make the pattern with your cubes.
Draw the cubes and colour them.

Do you know what this shape is called? 

This is a diamond shape.

Print the word *diamond.* _____

Examine each pattern carefully. Complete the patterns and describe them.

1. 

a. _____

b. _____

2. 

a. _____

b. _____

Over and Over Again

3. 

a. _____

b. _____

Lesson 3

Now, these patterns are really different. Look closely at them. Can you describe them?

What is happening to this pattern? Is it repeating itself?

Yes it is, but it changes as it is repeating. The stars are still being repeated, but they are changing each time they repeat. How do they change each time?

The student should answer that one star is added after each exclamation mark. Have the student represent the pattern in the four ways listed.

Over and Over Again

Day 10

Continue the pattern.

How might you use sounds to represent the pattern?

How might you use body actions to represent the patterns?

Represent the pattern with your interlocking cubes.

Draw the pattern with pictures.

A B B A A A B B B B A A A A A B B B B B

1. a. Can you see the pattern here? What is it?

_____

b. Complete the pattern.

_____

_____

2. 

a. What is the pattern?

_____

b. Complete it.

_____

$|++|$$|+++|$$$|

3. a. What is the pattern?

_____

b. Complete it.

_____

There are many different types of patterns. Use one of your manipulatives to come up with interesting patterns of your own.

Choose one of the patterns from Lesson 3. On a strip of paper as long as your arm, draw the pattern. You may use the exact shapes, draw different shapes, or draw pictures to represent the pattern.

When you are finished, your home instructor will check your pattern.

Go to Assignment Booklet 5B.

Make a strip of paper by cutting a piece of paper in lengths and taping the pieces together.

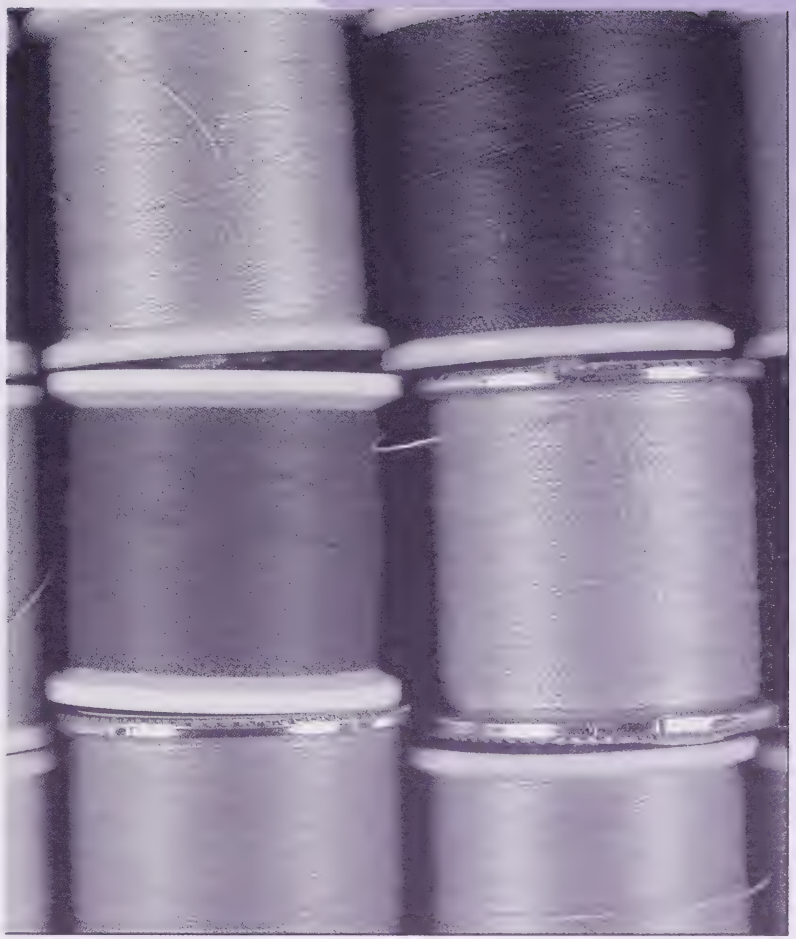
Day 11: Count It Out

Today you will use pictures and actions to show patterns.

Can you tell what number this picture shows?

What number might clap, clap, snap be?

Let's go on to find out.



Lesson 1

There are many ways of using patterns. One interesting way that you are already familiar with is counting using patterns.

You have used base ten blocks to show "one" like this: 

You would show "ten" like this.

You would show "eleven" like this.

Using this pattern, how might you show 21? Why?

The answer is that two tens and one one need to be shown because two tens added to the one make 21. Have the student explain each drawing.

Draw a picture to show 2.

Draw a picture to show 7.

Draw a picture to show 34.

Draw a picture to show 56.

Lesson 2

Here's another way of counting using a pattern.

The  = 1.

The  = 10.

1. a. What number does this represent?  

b. Why? _____

_____

2. a. What number does this represent?  

b. Why? _____

_____

3. a. Using this way of counting, show 17. _____

b. Why does this show 17? _____

4. a. Show 82. _____

b. Why does this show 82? _____

5. a. Using this way of counting, show 31. _____

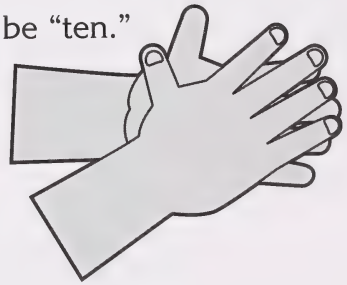
b. Why does this show 31? _____

Lesson 3

Here's another way of counting—by making sounds!

A snap of the fingers will be "one."

A clap of the hands will be "ten."



What number is this?
clap, clap, clap, clap, clap, clap, clap, snap

☐ Why?

The number is 71. Each clap is ten and each snap is one.

Count It Out

Your home instructor will snap and clap, and you get to say the number.

Print the number you "hear."

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

Clap and snap ten different numbers. Have the student write them down.

Lesson 4

Use these examples or have the student come up with some.

Use action patterns to show different numbers. Try these. Can you come up with your own actions?

hop = 1
wave of the arms = 10

wave, wave, wave, hop, hop

What number is this? ☐ Why?

The student should answer that the number is 32 and that each wave is ten and each hop is one.

Choose actions, such as hop and wave, to show different numbers. Be sure to tell what number each action equals. Have the student write the numbers.

Your home instructor will use action patterns to show numbers. Watch carefully and print the number you "see."

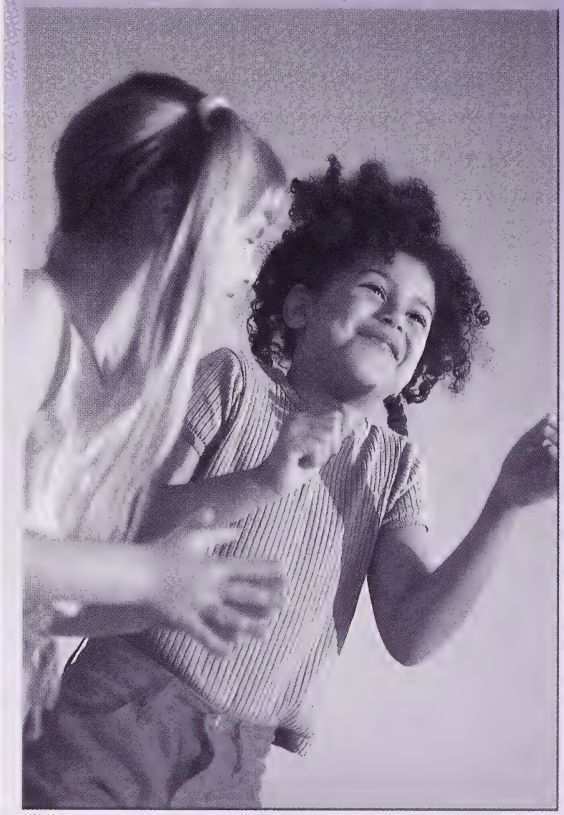
- _____
- _____
- _____
- _____

Count It Out

- _____
- _____
- _____
- _____
- _____
- _____

Make up your own patterns using pictures, sounds, actions, and manipulatives for different numbers.

Go to Assignment Booklet 5B.



Day 12: Make It Grow

Can a pattern grow? Does it need sunlight and rain to grow?

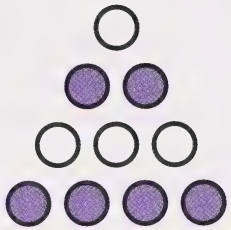
Like Jasper and Elena, you will see some growing patterns today. Then you will help them finish some growing patterns.

Lesson 1

The more Jasper and Elena were seeing patterns, the more they realized that there is an almost endless variety of them.

Jasper was looking at the wallpaper pattern in his bedroom. It was repeating itself. When he looked at it, he could see the pattern growing! That was really different.

Elena showed Jasper some patterns she found that grew. Here's one they both liked.

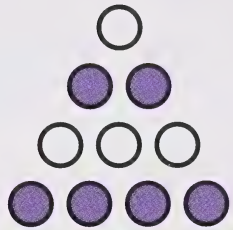


Jasper and Elena studied the pattern. Elena could see one pattern, and Jasper found another one. Can you find one, or both, patterns?

What do you think will come next in this pattern?

The answer is one circle is added in each row, and every other row is purple.

Fill in the new row.



_____

Did you draw a new row with five white circles? If you did, you were right. This is called a growing pattern. Can you think why?

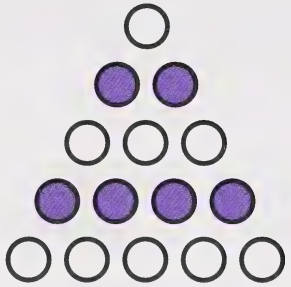
Growing patterns are a little different from some of the other patterns you have looked at because they don't just repeat themselves. These patterns get bigger with each repetition.

Remember the 2-D shapes you were studying in Module 4? Which shape does the above pattern remind you of?

_____

The answer is a triangle.

Now continue the pattern for three more rows. Remember that colour is part of the pattern too.



Look at the rows with the purple circles.

Write the number of circles in each row.

Make It Grow

Day 12

What is the same about these numbers?

_____

_____

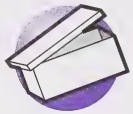
The answer is 2, 4, 6, and 8 are even numbers and 1, 3, 5, and 7 are odd numbers.

Look at the rows with the white circles. Write the number of circles in each row.

What is the same about these numbers?

_____

_____



Choose some manipulatives from your Math Box.

Assist the student with building patterns. Try to build two patterns into each arrangement, as was done in the circle pattern.

Build pyramid shapes using your manipulatives.

Lesson 2

Jasper wanted to build his own growing pattern, and he wanted it to have a pyramid shape.

He put a cube in his first row. 

Then he added two cubes to the second row. 

What will Jasper add to the third row?

1. Build and continue Jasper's growing pattern.

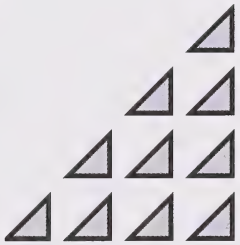
_____

_____

_____

2. Make these patterns grow. Continue the patterns.

a.



_____

b.

Look for growing pattens all around you. Look in your home and outside. If you look closely, you will see patterns everywhere.

Write down some of the growing patterns you found.

Lesson 3

There are other types of growing patterns to be found. Examine this one. Can you see how it grows?

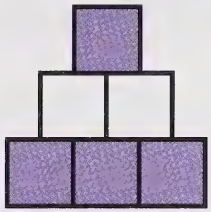
Complete this pattern.

Describe this pattern.

One square is added to the bottom row after each repetition of the top square.

Make It Grow

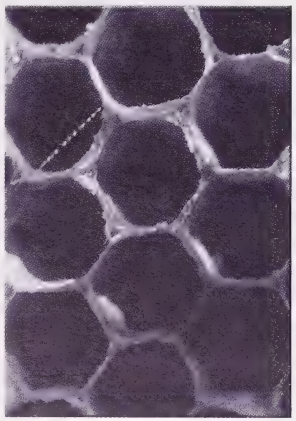
Draw the next three rows for this pattern.



Colour the row that will be purple.

Row five will be purple.

Do you see patterns in these pictures?



Day 13: What's Wrong with This Pattern?

If you look closely, you can sometimes find an error in a pattern.

When you know how a pattern works, you can spot the error.

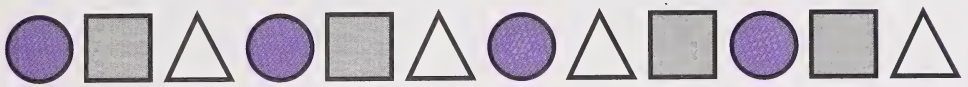
Let's see if you can spot what's wrong with some patterns. Then you can change them to make them correct.

What's Wrong with This Pattern?

Lesson 1

Jasper showed Elena a pattern that he liked. Elena looked at it and realized something was wrong.

Can you see what is wrong with this pattern?



Describe the pattern.

_____

What is wrong with the pattern?

_____

How can you fix the pattern?

_____

_____

The answer is that the triangle and square change places in the third repetition.

What's Wrong with This Pattern?

Draw the pattern as it should look.

Study the following patterns. You will be using these patterns in Lessons 2 and 3, too. Now, circle the mistake. Print the correct pattern on the line.

1. A B A A B A B A A B A B A A C A B A A B

2. hot cold warm hot cold warm hot warm cold hot cold warm

What's Wrong with This Pattern?

3. 

4. 

5. 

6. 

Lesson 2

Choose three of the patterns from Lesson 1, and show what sounds and actions you can use for them. Then perform the sounds and actions for the patterns.

Copy the corrected pattern 1 using sounds. Show what sounds you can use.

Copy the corrected pattern 1 using actions. Show what actions you can use.

What's Wrong with This Pattern?

Copy the corrected pattern 2 using sounds. Show what sounds you can use.

Copy the corrected pattern 2 using actions. Show what actions you can use.

What's Wrong with This Pattern?

Copy the corrected pattern 3 using sounds. Show what sounds you can use.

Copy the corrected pattern 3 using actions. Show what actions you can use.

What's Wrong with This Pattern?

Lesson 3

Choose some manipulatives from your Math Box.

Using the same patterns in Lessons 1 and 2, show how you can correct each one using manipulatives.

Go to Assignment Booklet 5B.

Have the student show the corrected patterns using one or more different manipulatives, for example, beans and pasta.

Day 14: Number Patterns

Today you will explore patterns made with numbers.

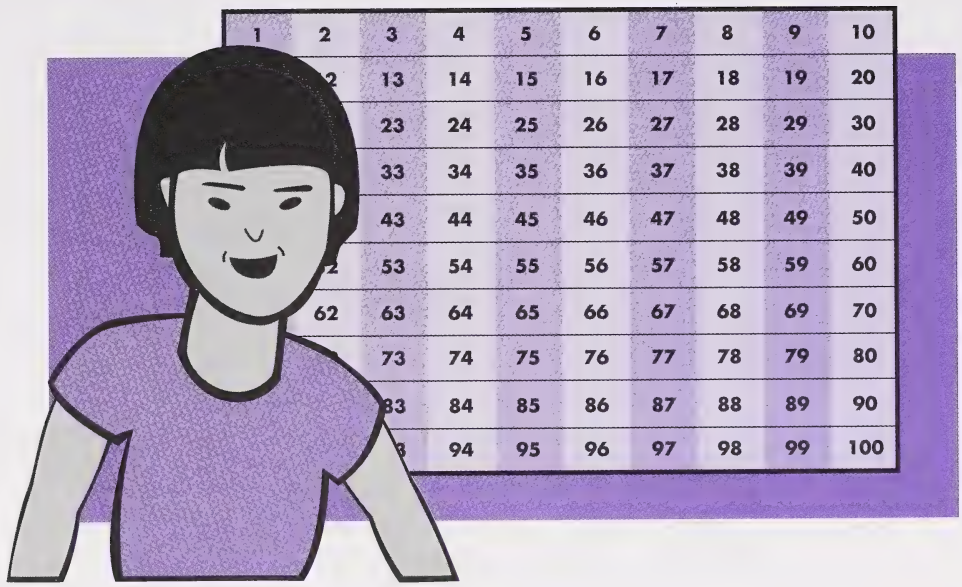
On One Hundred Charts, you will colour some different number patterns.

The last thing you will do today is to look at some pattens that Jasper and Elena made. You will figure what the patterns are.

Lesson 1

One afternoon, Jasper found Elena staring at the One Hundred Chart. He asked her what she was doing. Elena told him that she could see patterns in the chart. She challenged Jasper to find three patterns.

Take your One Hundred Chart out of your Student Folder.



1	2	3	4	5	6	7	8	9	10
2	13	14	15	16	17	18	19	20	
	23	24	25	26	27	28	29	30	
	33	34	35	36	37	38	39	40	
	43	44	45	46	47	48	49	50	
2	53	54	55	56	57	58	59	60	
62	63	64	65	66	67	68	69	70	
	73	74	75	76	77	78	79	80	
	83	84	85	86	87	88	89	90	
	3	94	95	96	97	98	99	100	

Study your One Hundred Chart. Can you see three patterns?

What were three patterns you found? Tell your home instructor.

Lesson 2

Do you remember how to skip count to 100 by 2s?

On the One Hundred Chart, colour red all the numbers when you count by two.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Describe the patterns you see to your home instructor.

Do you remember how to skip count to 100 by 5s? On the One Hundred Chart, colour blue all the numbers when you count by five.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Describe the patterns you see to your home instructor. Compare this chart with the one you just did. How do the charts look alike? How do they look different?

Do you remember how to skip count to 100 by 3s? On the One Hundred Chart, colour yellow all the numbers when you count by three.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Describe the patterns you see to your home instructor. Compare this chart with the other two. Do the charts look alike? How do they look different?

Number Patterns

Now pick a number you would like to count by on the One Hundred Chart. Colour all those numbers orange.

Have the student choose a number: 4, 6, 7, 8, or 9. Then after counting by that number, have him or her talk about the new pattern and the similarities and differences between all the charts.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Describe the patterns you see to your home instructor. Compare this chart with the other charts. How do the charts look alike? How do they look different?

Lesson 3

For each of these, have the student explain why he or she chose the numbers he or she did.

There are many different patterns in numbers, as you can see in the following exercises.

Find the pattern of numbers in the following. For each of the patterns, figure out what numbers belong in each blank. Explain why.

1. 15, 10, 15, 20, ☐, ☐, ☐, ☐

2. ☐, ☐, 12, 15, 18, 21, ☐, ☐

3. 34, 36, ☐, ☐, 42, 44, ☐, ☐, ☐

4. ☐, ☐, 80, 70, ☐, ☐, ☐, 30

5. 66, 64, 62, ☐, ☐, ☐, ☐, ☐

6. ☐, ☐, ☐, 71, 69, 67, 65, ☐, ☐, ☐

7. ☐, 8, 12, 16, ☐, ☐, ☐, ☐, 36

8. 27, 37, 47, ☐, ☐, ☐, ☐, ☐

Make up number patterns of your own on a separate sheet of paper.

Lesson 4

Elena and Jasper made up the patterns for this lesson. Do you think you can figure out the rule for each of the patterns?

1. a.

Rule:	
Input	Output
6	9
2	5
10	13
7	10

b.

Rule:	
Input	Output
11	3
15	7
9	1
10	2

c.

Rule:	
Input	Output
8	3
11	6
6	1
15	10

d.

Rule:	
Input	Output
3	9
14	20
6	12
11	17

2. Read the following problems. Find the number patterns, show your work, and solve the problems.

   a. Jasper collected marbles. On the first day, he collected five marbles. On the second day, he collected ten. On the third day, he collected fifteen marbles. How many marbles did Jasper collect on the sixth day?

Day 1 

Day 2 

Day 3 

Day 4

Day 5

Day 6

Jasper collected ☐ marbles on the sixth day.

b. Elena was saving her money for a special gift for her mother. She saved three dollars the first week, six dollars the second week, and nine dollars the third week. How much money did she save in the seventh week?

Week 1 $ $ $

Week 2 $ $ $ $ $ $

Week 3 $ $ $ $ $ $ $ $ $

Week 4

Week 5

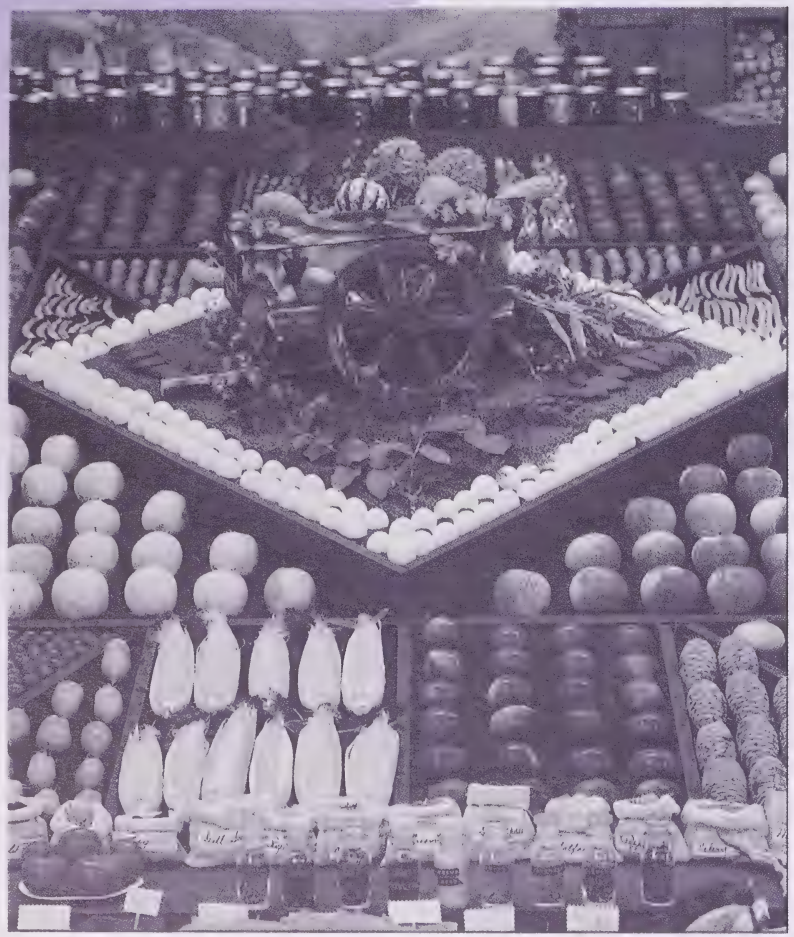
Week 6

Week 7

Elena saved ☐ in the seventh week.

Go to Assignment Booklet 5B.

Day 15: Making Patterns



Are you ready for some fun with patterns?

You will create some of your own patterns today. You will also follow and write directions to create patterns.

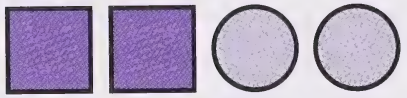
All of these patterns will help you make a pattern poster to hang up where you can see it.

You may want to start your poster today and finish it tomorrow.

Lesson 1

Jasper was helping Elena create her own pattern. She took out her 2-D shapes and placed two squares on the table.

She wondered what to add to these two. Jasper looked through her cutouts and placed two circles next to the squares.



"Now we have a pattern," he said. Elena told Jasper she wanted to add something else to it. She found a couple of triangles and put them next to the circles.

"Now there's a pattern," she said.

Making Patterns

Describe the pattern Elena and Jasper created.

The answer should be square, square, circle, circle, triangle, triangle.

Jasper reminded Elena that this was her pattern stem. Elena now wanted to **extend** her pattern.

Discuss the term *extend* with the student. It means to make something longer or to stretch it out.

Take the stem of Elena's pattern and extend it across this page.

Lesson 2

From your Math Box, choose manipulatives to make a pattern or use the cutouts from your Student Folder.

Make a pattern using the objects you chose.

Making Patterns

Draw your pattern stem here.

Now extend your pattern.

Now, invent a pattern for your home instructor to extend. Place the stem of the pattern on your desk. Ask your home instructor to extend the pattern.

Check your home instructor's work. Is it correct?

Circle 

or 

.

Lesson 3

See how well you can follow instructions. Read this description of a pattern.

- This three-sided shape appears first. One of its vertices points up.
- A four-sided shape, with four equal sides, comes next.
- The same four-sided shape follows.
- Then there is another three-sided shape with one of its vertices pointing down.
- Then there are two more of the same four-sided shapes as before.

Making Patterns

Make this pattern with your 2-D cutouts. Then draw it here.

Extend the pattern.

Draw a pattern using these symbols. 

Extend the pattern.

Making Patterns

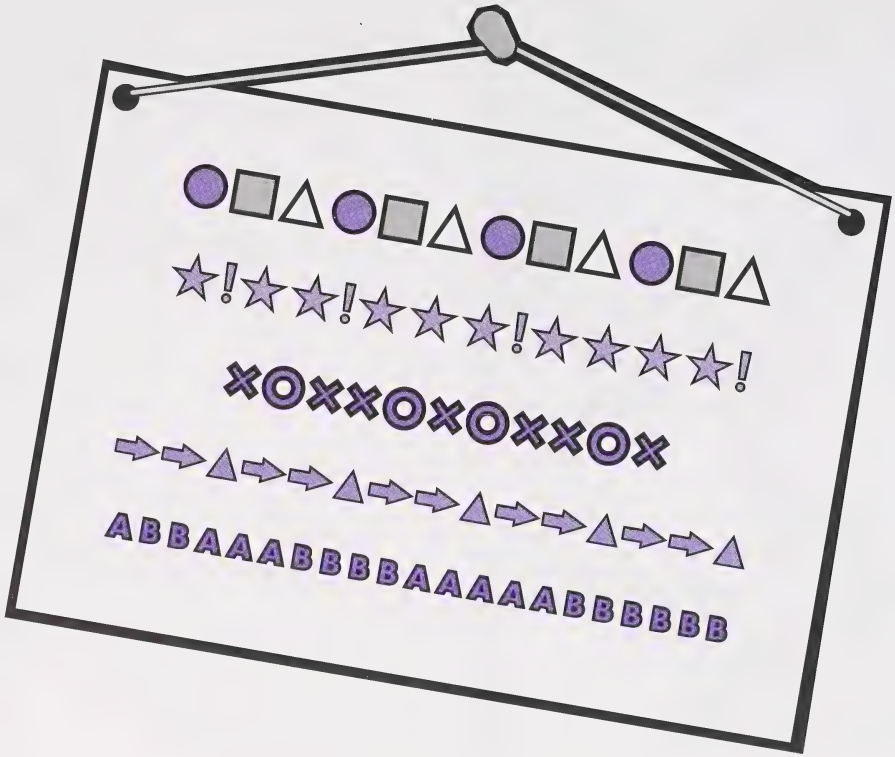
Draw a pattern using these symbols. 

Extend the pattern.

Lesson 4

You get to make a poster showing picture patterns. Your home instructor will tell you how.

When you finish your poster, hang it up in a spot where you can see it.



Day 16: Calculating Patterns

Now that you have practised using many patterns, you know that some patterns can be made with numbers.

Today you will use a calculator to help you create number patterns.

What kind of patterns do you think calculators can show?

Calculating Patterns

Lesson 1

5 10 15 20

Do you see a pattern in the above numbers?

Circle  or  .

What is it? _____

_____

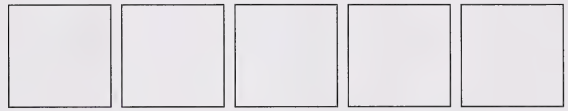
1. Print the next five numbers that follow these in the pattern.

2. a. If you continue with this pattern, will these numbers appear? Circle the ones that will appear.

48 54 69 70 76 81 85 93?

Guide the student into realizing that these numbers that will not appear do not end in 5 or 0 or these numbers do not appear when skip counting by fives.

b. Which numbers will not appear?



Why not?

Take your One Hundred Chart out of your Student Folder.

Skip count by 5s to 100 while pointing to each number on the One Hundred Chart. Look at the single-digit numbers and the second digit of each two-digit number. Do you notice a pattern?

Circle  or  .

What is it?

The pattern is 5, 0, 5, 0, 5, 0, 5, 0. If the student does not see the pattern, point it out.

Ensure the student looks at the One Hundred Chart to determine the answers.

3. Print two numbers over 80 that will appear. 

4. Print four numbers between 55 and 70 that will not appear.

Look at your One Hundred Chart to check your answers. Were you right? Circle Yes or No.

Lesson 2

Take out your calculator from your Math Box.

Can you make your calculator skip count?

If you were to press the following on your calculator, what do you think would happen?

+ 2 = = = =

1. Which numbers do you think will appear? ____, ____, ____, ____

Try it now on your calculator.

Did the numbers appear as you said they would?

Circle 

or 

.

2. a. If you kept pressing 

, would these numbers appear?
Circle the ones that will appear.

23 34 45 48 51

b. Which numbers will not appear? ☐ ☐ ☐

The numbers that are not even numbers, or the numbers that do not end in 2, 4, 6, 8, or 0, will not appear when skip counting by 2s.

Tell your home instructor why these numbers will not appear.

Use your One Hundred Chart to do the following.

Skip count by 2s to 100 while pointing to each number. Look at the single-digit numbers and the second digit of each two-digit number.

Do you notice a pattern? Circle 

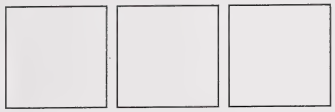
or 

.

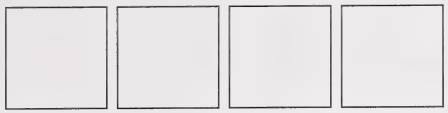
What is it? _____

The pattern is 2, 4, 6, 8, 0.

3. Print three numbers over 40 that will appear.



4. Print four numbers between 50 and 72 that will not appear.



Continue skip counting by 2s on your calculator.
Were your right?

Circle 

or 

.

Lesson 3

1. How would you skip count by 3s on your calculator? Print what you will press in the boxes.

2. Which numbers do you think will appear?

Try it now on your calculator.

Did the numbers appear as you said they would?

Circle  or  .

Look at your One Hundred Chart to do the following questions.

The student should answer that these numbers do not appear when skip counting by 3s.

3. a. If you kept pressing [=], would these numbers appear? Circle the ones that will appear.

25 29 30 36 40

b. Which numbers will not appear? 

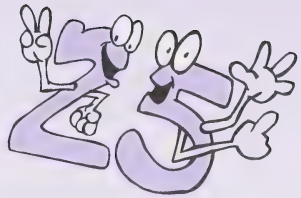
Calculating Patterns

4. Print three numbers over 40 that will appear.

5. Print four numbers between 60 and 90 that will not appear.

Continue skip counting by 3s on your calculator. Check your answers. Were you right?

Circle  or  .



Lesson 4

1. How would you skip count by 4s on your calculator? Print what you will press in the boxes.

2. Which numbers do you think will appear?

Try it now on your calculator.

Did the numbers appear as you said they would?

Circle Yes or No.

Look at your One Hundred Chart to do the following.

3. a. If you kept pressing =, would these numbers appear? Circle the ones that will appear.

28 33 39 40 42

Calculating Patterns

b. Which numbers will not appear? ☐ ☐ ☐

Skip count by 4s to 100 while pointing to each number. Look at the single-digit numbers and the second digit of each two-digit number.

Do you notice a pattern? Circle 

or 

.

What is it? _____

The pattern is 4, 8, 2, 6, 0.

4. Print three numbers over 40 that will appear.

☐ ☐ ☐

5. Print four numbers between 60 and 90 that will not appear.

☐ ☐ ☐ ☐

Continue skip counting by 4s on your calculator. Check your answers.

Were you right? Circle 

or 

.

6. Enter the following on your calculator. Print the numbers you see on the screen.

a. 1 + 1 = = = = = = =

b. 2 + 2 = = = = = = =

c. 3 + 3 = = = = = = =

d. 4 + 4 = = = = = = =

e. 5 + 5 = = = = = = =

f. 1 0 + 1 0 = = = = = = = =

g. 7 0 − 2 = = = = = = = =

h. 5 7 − 3 = = = = = = = =

i. 6 0 − 4 = = = = = = =

j. 8 5 − 5 = = = = = = =

k. 9 0 − 1 0 = = = = = = =

Go to Assignment Booklet 5B.

Day 17: I Can Pattern My Name

Today Elena will make a pattern using her name.

You know patterns can be shown in many different forms. Some of these forms are letters, numbers, words, linking cubes, pictures, sounds, actions, and calculators.

You will use many of these forms to show Elena how to make different patterns with her name. Which one is your favourite?

Lesson 1

Elena printed the letters of her name in the squares of a grid. She circled the first letter of her name. Then she coloured the last letter of her name purple.

E	l	e	n	a	E	l	e	n	a
E	l	e	n	a	E	l	e	n	a
E	l	e	n	a	E	l	e	n	a
E	l	e	n	a	E	l	e	n	a
E	l	e	n	a	E	l	e	n	a
E	l	e	n	a	E	l	e	n	a
E	l	e	n	a	E	l	e	n	a
E	l	e	n	a	E	l	e	n	a
E	l	e	n	a	E	l	e	n	a
E	l	e	n	a	E	l	e	n	a

I Can Pattern My Name

Do you see any patterns? Circle 

or 

.

What are they? _____

_____

_____

The student should say either white, white, white, white, purple or capital, small, small, small, small.

Elena could see a skip-counting pattern. What skip-counting pattern do you see?

_____

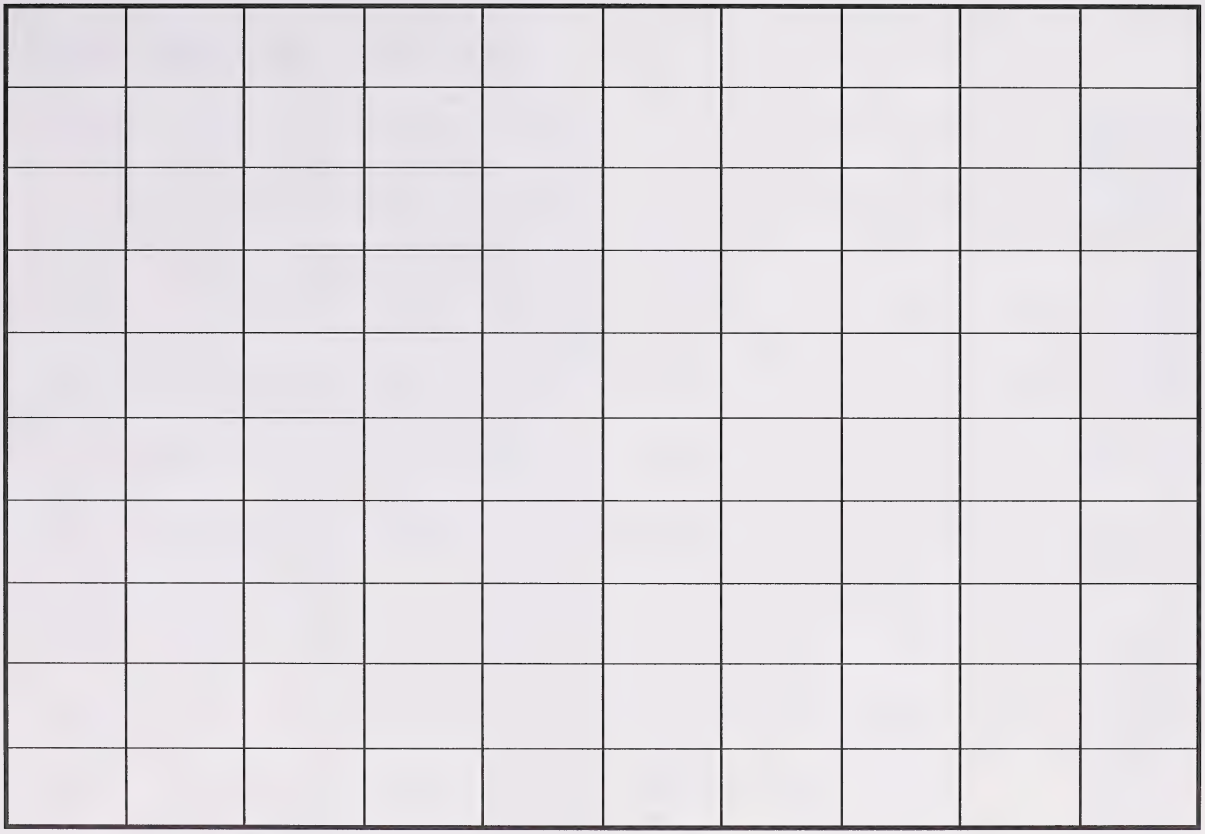
_____

The student should answer that every 5th and 10th letter is a capital *E*.

Predict the patterns you will see if you write your name over and over in the squares of a grid like Elena did.

I Can Pattern My Name

Print the letters of your name over and over in the squares of the grid below. Circle the first letter of your name. Colour the last letter of your name any colour you like.



I Can Pattern My Name

Describe the patterns you see.

_____

_____

Check your prediction. Were you right?

Circle  or  .

Lesson 2

Elena described her name pattern as white, white, white, white, purple. She wanted to show her name pattern in different ways. Can you help her show her name pattern in different ways?

What ways can Elena show her name pattern?

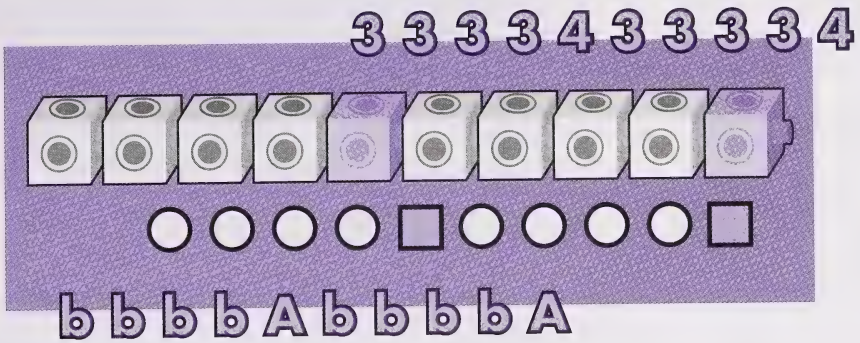
_____

_____

_____

Guide the student to answer any of the following ways: manipulatives, sounds, actions, linking cubes, numbers, letters, words, skip counting on the calculator, pictures. Ensure that the pattern is followed, with the last item being different.

I Can Pattern My Name



Choose manipulatives from your Math Box. Get your interlocking cubes.

Show Elena's name pattern with the manipulatives you chose. Then draw the pattern you made here.

I Can Pattern My Name

Ensure that there are four cubes of one colour and one cube of another colour.

Make Elena's pattern with interlocking cubes. Which cube will be a different colour? _____

Draw the cubes.

What sounds can you use to show Elena's pattern?

_____

Describe the pattern.

_____

_____

What actions can you use to show Elena's pattern?

Describe the pattern.

What numbers can you use to show Elena's pattern?

Describe the pattern.

What letters can you use to show Elena's pattern?

These can be 11112 for the numbers; AAAAB for the letters; yes, yes, yes, yes, no for the words; or any combination of four items and one item.

I Can Pattern My Name

Describe the pattern.

_____

_____

What words can you use to show Elena's pattern?

_____

Describe the pattern.

_____

_____

Show how to skip count using the calculator to show Elena's name pattern.

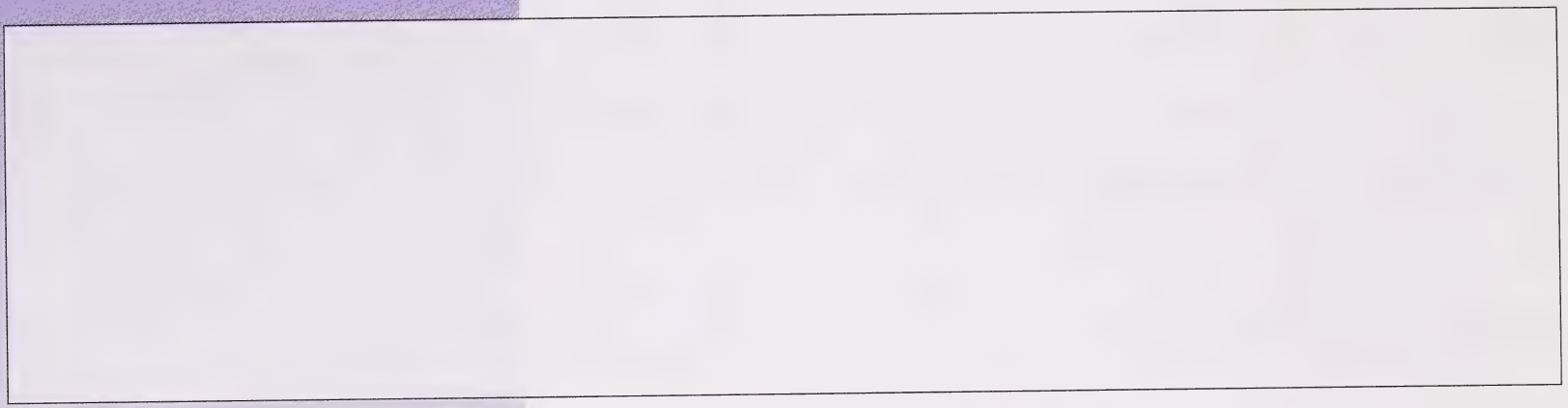
When skip counting, every fifth letter changes, so have the student skip count by five.

I Can Pattern My Name

Day 17

The pictures should show a pattern of four and one.

Draw pictures to show Elena's name pattern.



Lesson 3

A B B A

Look at this pattern. Is there a way to **translate** this pattern into numbers? Do you know what that means? You just finished translating Elena's name pattern nine different ways! You were changing or translating the pattern from one form to another.

Here is how you might translate these letters into numbers.

A B B A translates to 2 4 4 2

I Can Pattern My Name

Describe the letter pattern. _____

_____

Describe the number pattern. _____

_____

Can you see how these two are the same? They are the same pattern. Only the shapes are different. You can translate, or change, one pattern into different forms.

Here is another example.

Describe this pattern. _____

_____

I Can Pattern My Name

One triangle or moon is added with each repetition. The patterns are the same because they have the same description.

Describe this pattern. _____

_____

Are these two patterns the same? Circle 

or 

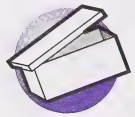
.

Why or why not? _____

_____

They are the same pattern. Only the shapes are different.

Do you think you can create a pattern and then translate it into another form? Try it.



Choose some manipulatives from your Math Box.

With your objects, create a pattern. (You may look back in this book for ideas.)

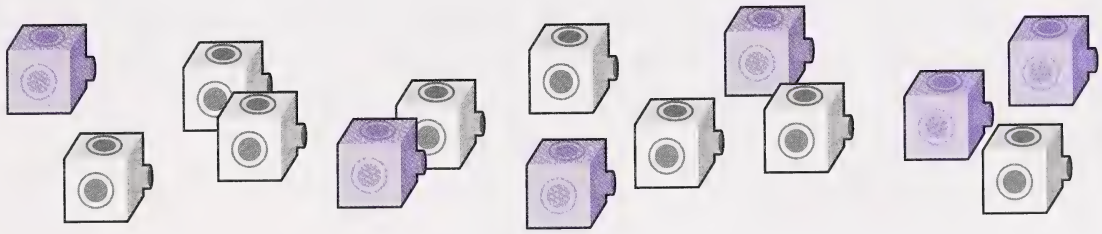
Refer to the Home Instructor's Guide before starting this activity.

I Can Pattern My Name

Describe your pattern. _____

_____

Now, using the pattern you just created, translate it into interlocking cubes. Draw the cubes in the box.



I Can Pattern My Name

Translate your pattern into pictures. Draw the pictures in the box.

Translate your pattern into sounds.

What sounds did you choose? _____

Describe the pattern. _____

_____

I Can Pattern My Name

Translate your pattern into actions.

What actions did you choose? _____

Describe the pattern. _____

_____

Translate your pattern into words.

What words did you choose? _____

Describe the pattern. _____

_____

Translate your pattern into numbers.

What numbers did you choose? _____

Describe the pattern. _____

_____

I Can Pattern My Name

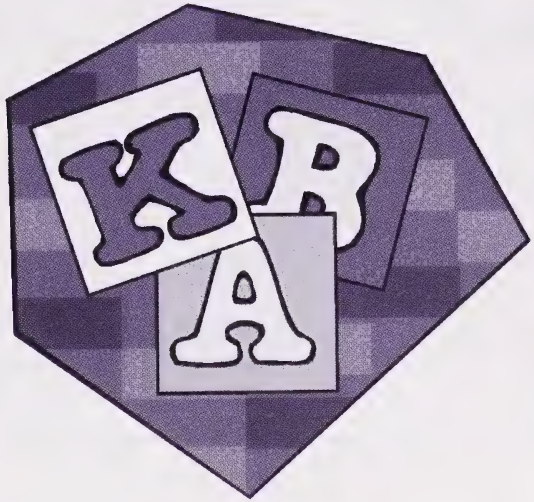
Translate your pattern into letters.

What letters did you choose? _____

Describe the pattern. _____

_____

Go to Assignment Booklet 5B.



Day 18: What Do I Know Now?

It's time to look back at what you have learned.

First you learned about units of time. What do you remember about how you measure time? Can you estimate how much time an activity will take?

Then you got to make and describe patterns using many forms. What was your favourite way of making patterns? Don't patterns make the world around you more exciting?

This is a review of what you learned in this module. See how much you remember.

1. Circle the unit of time you would use to measure these activities.

   a. how long it takes to sing "Old MacDonald Had a Farm" minutes hours

   b. how long a ski holiday is minutes hours

   c. how long it takes to play a game of soccer minutes hours

   d. how long you sleep minutes hours

   e. how long it takes to brush your teeth minutes hours

2. a. How many minutes are in an hour? ☐

   b. How many hours are in a day? ☐

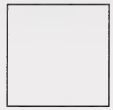
   c. How many days are in a week? ☐

d. Name the days of the week. _____ _____

_____ _____

_____ _____

_____

e. How many months are in a year? 

f. Name the months and print them on the lines.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

3. Circle the correct answer.

   a. Lacey watched a video for 72 minutes. Is that more or less than one hour? more less

   b. Mariah spent 30 minutes doing homework. Is that more or less than one hour? more less

4. a. Steve walked for two hours. How many minutes did he walk? ☐

   b. Explain your answer. _____

   _____

5. a. Rita's father spent three days in Yellowknife. How many hours was he there? ☐

   b. Explain your answer. _____

   _____

6. Penny slept for 30 hours last weekend. Is that more or less than one full day?

   _____

7. Len went on a walk for 130 minutes. Is that more or less than two hours? _____

8. Sheila watched TV for 58 minutes. Is that more or less than one hour? _____

9. Gabrielle spent 72 hours at her aunt's house. How many days is that? ☐

10. Fill in the dates on the calendar. You will use the calendar for questions 11 to 13.

MAY

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1

11. Print the days of the week for these dates.

a. May 25 _____

b. May 7 _____

c. May 9 _____

d. May 17 _____

e. May 30 _____

f. May 1 _____

12. Print the date for each of these.

a. 2nd Monday _____

b. 4th Sunday _____

c. 1st Wednesday _____

d. 3rd Tuesday _____

e. 5th Saturday _____

13. Answer the questions. Show and explain how you got your answers.

a. How many months are there in three years and one month? ☐

b. How many days are there in two weeks and four days? ☐

c. How many months are there in five years? ☐

14. Look carefully at the pattern.

Describe the pattern. _____

_____

Draw pictures to show the pattern.

Copy the pattern using sounds. Show what sounds you can use.

Copy the pattern using actions. Show what actions you can use.

15. Complete the pattern.

a.  _____

b. Describe the pattern. _____

_____

16. Complete the pattern.

_____

17. Look at the pattern. 1 =  10 = 

Using the pattern, show the following numbers.

a. 16

b. 73

c. 37

d. 45

18. Put a pink X on the mistakes in the patterns. Then correct the pattern.

a. b B c C d D e E f F G g h H i I j J k K l L

b. hop run skip hop hop run run skip skip hop hop run run run skip skip skip

c. 

d. 

_____

e. 

_____

19. Study these patterns and fill in the missing numbers.

a. _____, _____, _____, 35, 40, 45, _____, _____

b. 26, 24, 22, _____, _____, _____, _____

c. 80, _____, _____, 50, 40, _____, _____

d. _____, _____, _____, _____, 42, 45, 48

20. Study the patterns and print the rule.

a.

Rule:	
Input	Output
3	7
7	11
13	17

b.

Rule:	
Input	Output
12	5
7	0
21	14

c.

Rule:	
Input	Output
1	11
45	55
15	25

21. Press these keys on your calculator.

What will be the next five numbers to appear on the calculator screen?

a. 

b. If you keep pressing =, which of these numbers will appear? Circle them.

32 36 40 42 44 48

c. Why will the numbers you circled appear?

_____

22. What four numbers over 50 will you see on your calculator screen if you skip count by 2s?

23. What four numbers between 60 and 80 will you not see on your calculator if you skip count by 2s?

Module Summary

Congratulations

You have now completed Module 5: It's About Time—and Patterns, Too. These are the things you learned:

- how to estimate and measure time in minutes and hours
- whether to use minutes or hours when measuring time
- the names of the months of the year in order
- the connection between the number of minutes to an hour, hours to a day, days to a week, and months to a year
- how to read the date on a calendar
- what a pattern is
- how to describe, make, and translate a pattern

Day 2

You will need beads and string for this activity. (You can also do this activity with interlocking cubes.)

- Arrange the beads and string in front of you.
- Estimate how many beads you can string in one minute.
- Set a timer for one minute.
- Begin stringing the beads.
- When the timer goes off, count the number of beads you strung. Were you close to your estimate?

Day 3

Choose **one** of these tasks to do. You must finish it in 5 minutes. Set a timer for 5 minutes. When the timer goes off, you must stop whatever you are doing. Make sure to pace yourself.

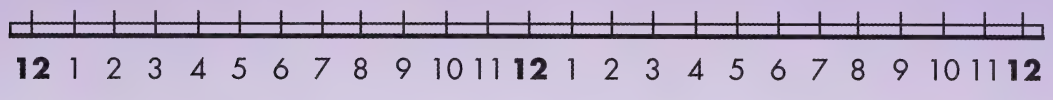
Try the other tasks when you have the time.

- Eat an ice cream cone.
- Brush your teeth.
- Watch a movie.
- Draw a picture of something that happened yesterday.

Day 4

Activity 1

Make a time line of what you do on a typical Saturday. List in order five things you do after you wake up.



List the things you do after that.

Draw on sheets of paper a picture of each of the activities you listed. Then hang them up in the order in which they are done. You can hang them on a clothesline with clothespins or pin them in a row on the wall.

Extension Activities

Activity 2

What do you do on a weekday?

What do you usually do at seven o'clock in the morning?

What do you usually do at nine o'clock in the morning?

What do you usually do at midnight?

What do you usually do at noon?

What do you usually do at six o'clock in the evening?

What do you usually do at three o'clock in the afternoon?

Extension Activities

Activity 3

Draw pictures on your own paper that show what you do at each of the following times.

- morning
- noon
- afternoon
- evening
- night

Label and display your pictures when you are done.

Activity 4

List the things you do in class before lunch.

_____ _____

_____ _____

_____ _____

List the things you do in class after lunch.

_____ _____

_____ _____

_____ _____

Draw on sheets of paper a picture of each of the activities you listed. Then hang them up in the order in which they are done. You can hang them on a clothesline with clothespins or pin them in a row on the wall.

Day 6

Answer these questions and explain your answers.

1. Would you rather play your favourite game for two hours or 100 minutes?

_____

_____

Extension Activities

2. Would you rather be in class for one hour or 65 minutes?

3. Would you rather watch your favourite movies for three hours or 160 minutes?

4. Would you rather spend two days or 22 hours on a camping trip?

5. Would you rather have a birthday party that lasted 200 minutes or three hours?

6. Would you rather spend 19 hours or one day at your friend's house?

_____

_____

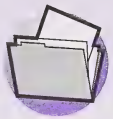
Day 7

Activity 1

Find a calendar that you or your family is not using.

Fill in the dates of your birthday, your family and friend's birthdays, special events, holidays, vacations, and any other occasions you would like to mark. Try to fill in at least one date for each of the 12 months. Print in what the occasion is, and draw, or cut and paste, a picture on the dates.

Activity 2



Take out the Months page from your Student Folder

Cut out the months of the year, and glue them in order in the boxes on the following page.

Extension Activities

Activity 3

Jasper and Elena decided to write down all the important things that happen in a year on a calendar. These are some of the events and the months in which they occur that Jasper and Elena decided were important.

Check the calendar to see if they put the events in the correct month.

Elena's birthday	April	Grandma's birthday	March
Jasper's birthday	May	Valentine's Day	February
School starts	August	Thanksgiving	October
School ends	June	New Year's Day	January
Christmas	December	Remembrance Day	November
Canada Day	July	Labour Day	September

JANUARY	**FEBRUARY**	**MARCH**	**APRIL**
New Year's Day	Valentine's Day	Grandma's birthday	Elena's birthday
MAY	**JUNE**	**JULY**	**AUGUST**
Jasper's birthday	School ends	Canada Day	School starts
SEPTEMBER	**OCTOBER**	**NOVEMBER**	**DECEMBER**
Labour Day	Thanksgiving	Remembrance Day	Christmas

Extension Activities

Now think of all the events that are important in your life that happen every year. List them and the dates they occur. Try to find events that occur in each month of the year.

Activity 4

You will need a current calendar for this activity. Solve these problems.

If garbage day is the second Thursday of every month, list the dates the garbage will be collected this year.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Print the day of the week for each of the following:

- the seventh day of the sixth month _____
- the second day of the second month _____
- the sixteenth day of the first month _____

- the fourth day of the twelfth month _____
- the twenty-second day of the eleventh month _____
- the eighth day of the ninth month _____
- the twenty-third day of the fifth month _____
- the nineteenth day of the fourth month _____
- the twenty-seventh day of the eighth month _____
- the tenth day of the tenth month _____
- the thirteenth day of the third month _____
- the thirty-first day of the seventh month _____

What are the dates of each of the following? Use a calendar to answer each question.

- Elena's friend's birthday on the second Friday of the eighth month

_____

- Jasper's hiking trip on the fourth Sunday of the seventh month _____

- Mindy's first day of ballet class on the third Tuesday of the first month

_____

- Franko's final soccer game on the first Monday of the tenth month

_____

- Cassandra's first golf game on the third Saturday of the sixth month

_____

- Bruno's piano recital on the fourth Thursday of the ninth month

_____

For the rest of this activity, think of your own calendar puzzles. Print them on a separate piece of paper and give them to a friend or family member to figure out.

Extension Activities

Day 8

Answer these questions and explain your answers.

1. Would you rather have a vacation for two weeks or 16 days?

_____

_____

2. Would you rather wait 35 days or six weeks for your birthday?

_____

_____

3. Would you rather go travelling for 25 days or three weeks?

_____

_____

4. Would you rather be 100 months old or eight years old?

_____

_____

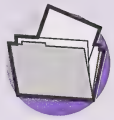
5. Would you rather wait for three years or 30 months to get a puppy ?

_____

_____

Days 9–16

Activity 1



You will need your 2-D diamond shapes from your Student Folder for this activity.

On a piece of paper, place the diamond shapes in patterns. Trace them with your pencil. Make as many different patterns as you can.

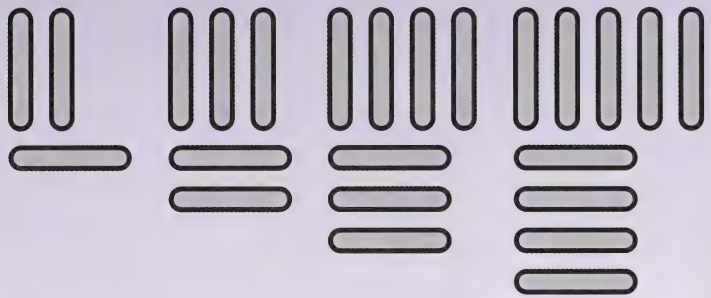
Extension Activities

Experiment with the diamonds. Turn them on their sides and flip them to get interesting patterns.

Activity 2

What comes next in the patterns? Extend each pattern at least three more times.

1.



2.

3. 

4. 

Activity 3

Can you find the number pattern? Try to extend each pattern.

1. 1, 2, 4, 8, 16, _____

2. 2, 4, 3, 5, 4, 6, _____

3. 2, 3, 8, 9, 14, 15, _____

4. 11, 22, 33, _____

5. 3, 3, 6, 6, 9, 9, _____

6. 1, 10, 2, 9, 3, _____

Make up number patterns of your own on a separate piece of paper.

Activity 4

Finish these alphabet patterns.

1. A a B b C c _____

_____

2. b a d c f e h g j i _____

_____

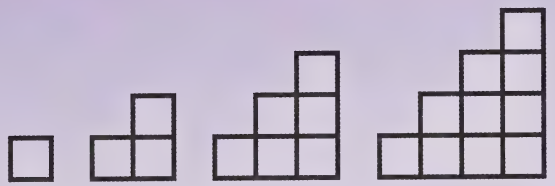
3. A B C z z D E F z z G H I z z _____

_____

4. a c e g i k m _____

Activity 5

You will need square pattern blocks or 2-D square shapes from your Math Box.



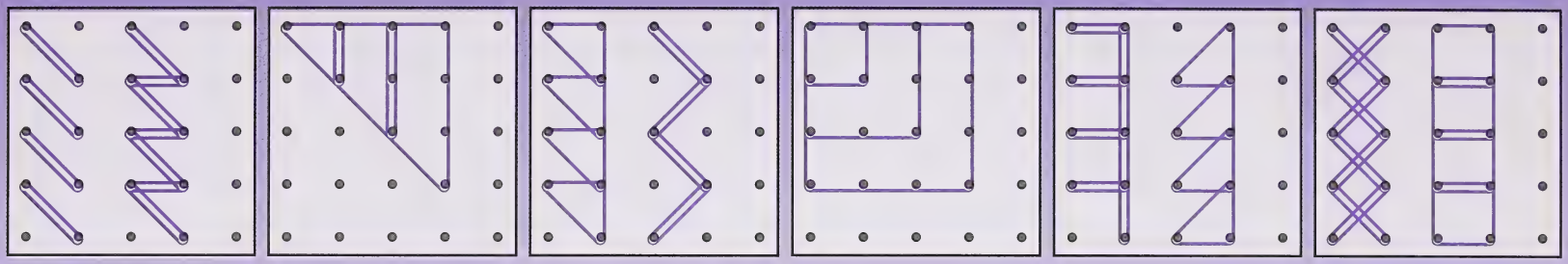
Use the blocks or shapes to build a staircase. Extend the pattern at least three times.

Activity 6

Take out your geoboard and elastic bands from the Math Box.

Create as many different kinds of patterns as you can on the geoboard. Try to make ten. Make growing patterns with squares and triangles. Some examples are given.

Extension Activities



Activity 7

If you have a geoboard and pegs, create as many different patterns as you can. Use the different colours of the pegs to create the patterns.

Activity 8

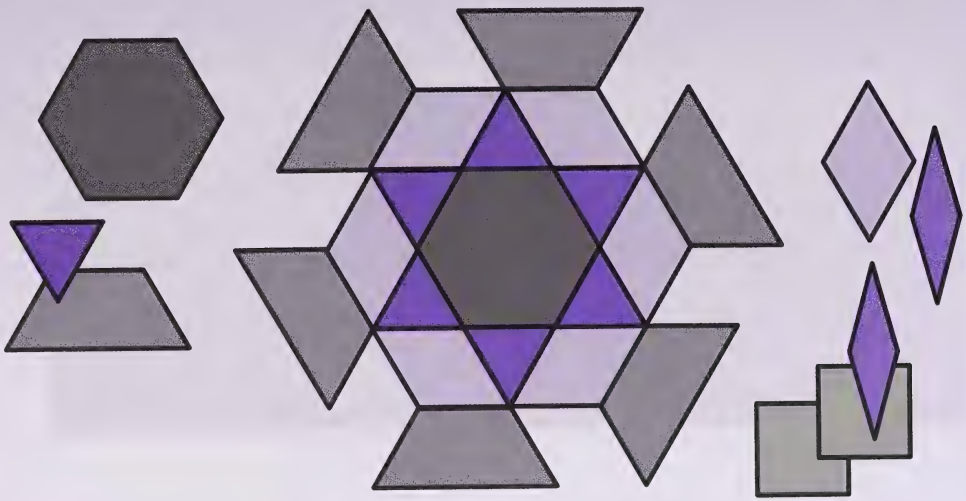
You will need a stamp pad and a variety of stampers. You can make your own stampers with cut potatoes, your hands, your fingerprints, cookie cutters, and sponge prints. You will have to make a design in the potato and sponge before you can use them. You will also need a sheet of coloured construction paper, poster paper, or other paper you would like to make patterns on.

- Make a border by making a pattern of your stamper around the outside edge.
- Make attractive patterns on the paper with your stamper.

Activity 9

You will need your pattern blocks or 2-D pattern shapes from the Math Box. Use pattern blocks if you have them.

Begin with one shape. Decide what other shapes can be used to encircle it. If spaces appear, try to put another shape to fill the space. Continue building shapes around the first shape. Create several patterns.



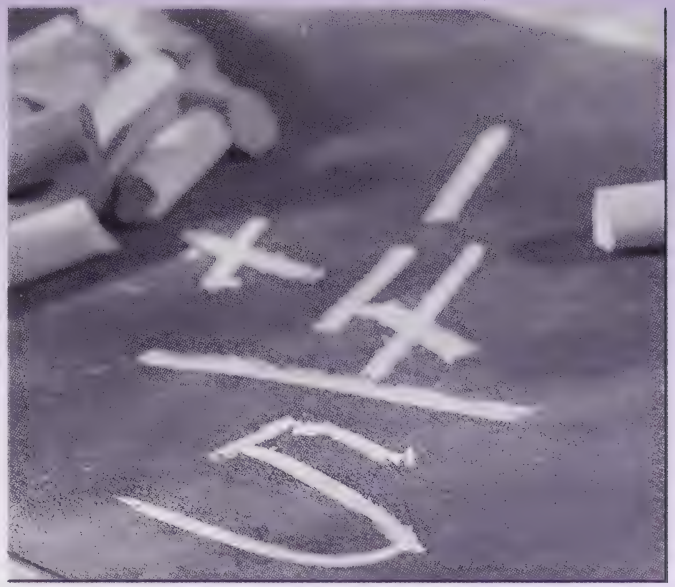
Extension Activities

Day 17

Follow these directions to make patterns on the grid.

- On the bottom row, create a pattern using letters.
- On the next row, translate the pattern into numbers.
- On the next row, translate the pattern into words.
- On the next row, translate the pattern using colours.
- On the next row, translate the pattern into pictures.
- On the next row, translate the pattern into 2-D shapes.
- On the top row, translate the pattern any way you want.

Appendix



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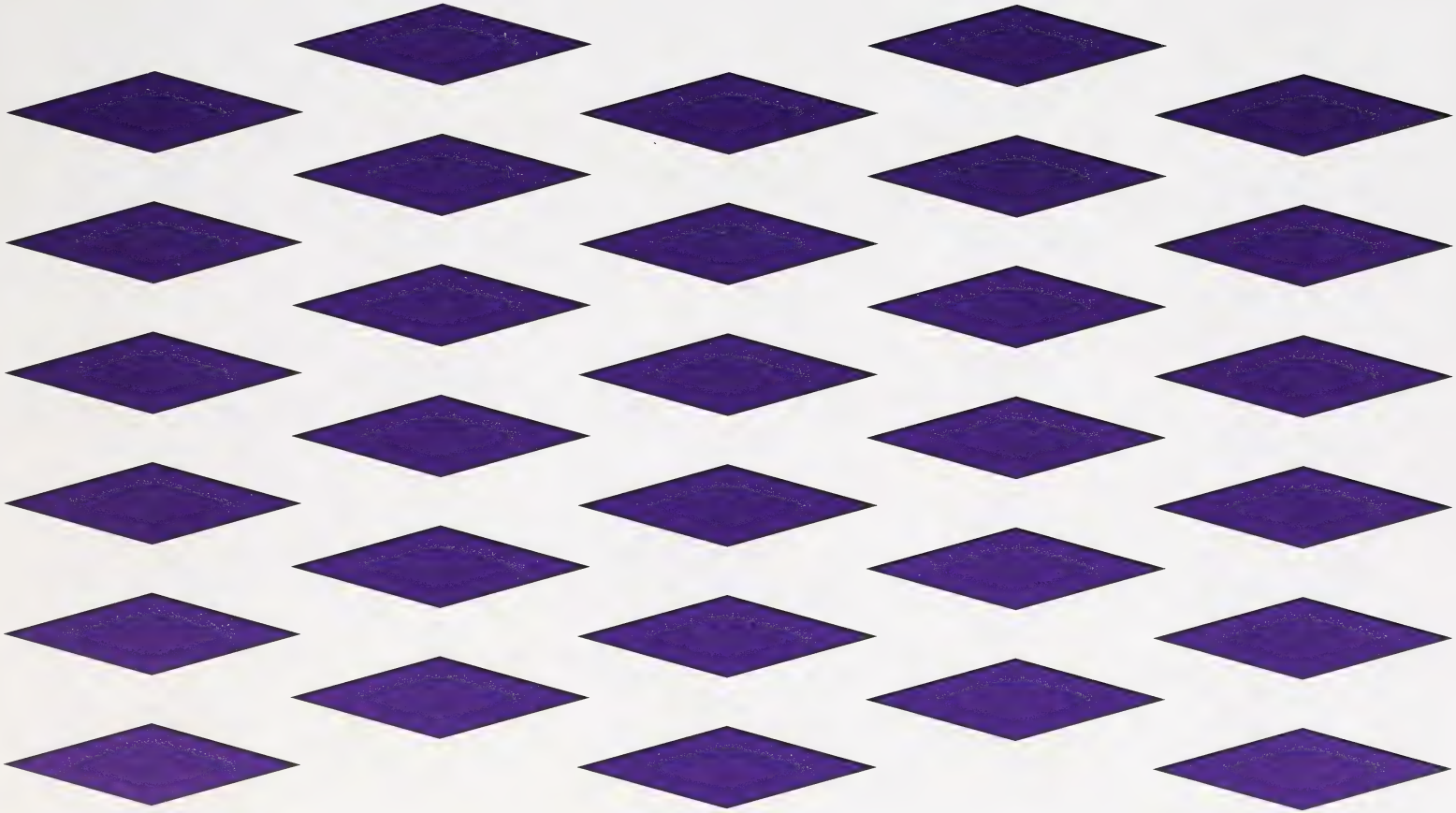
Analog Clock

Months

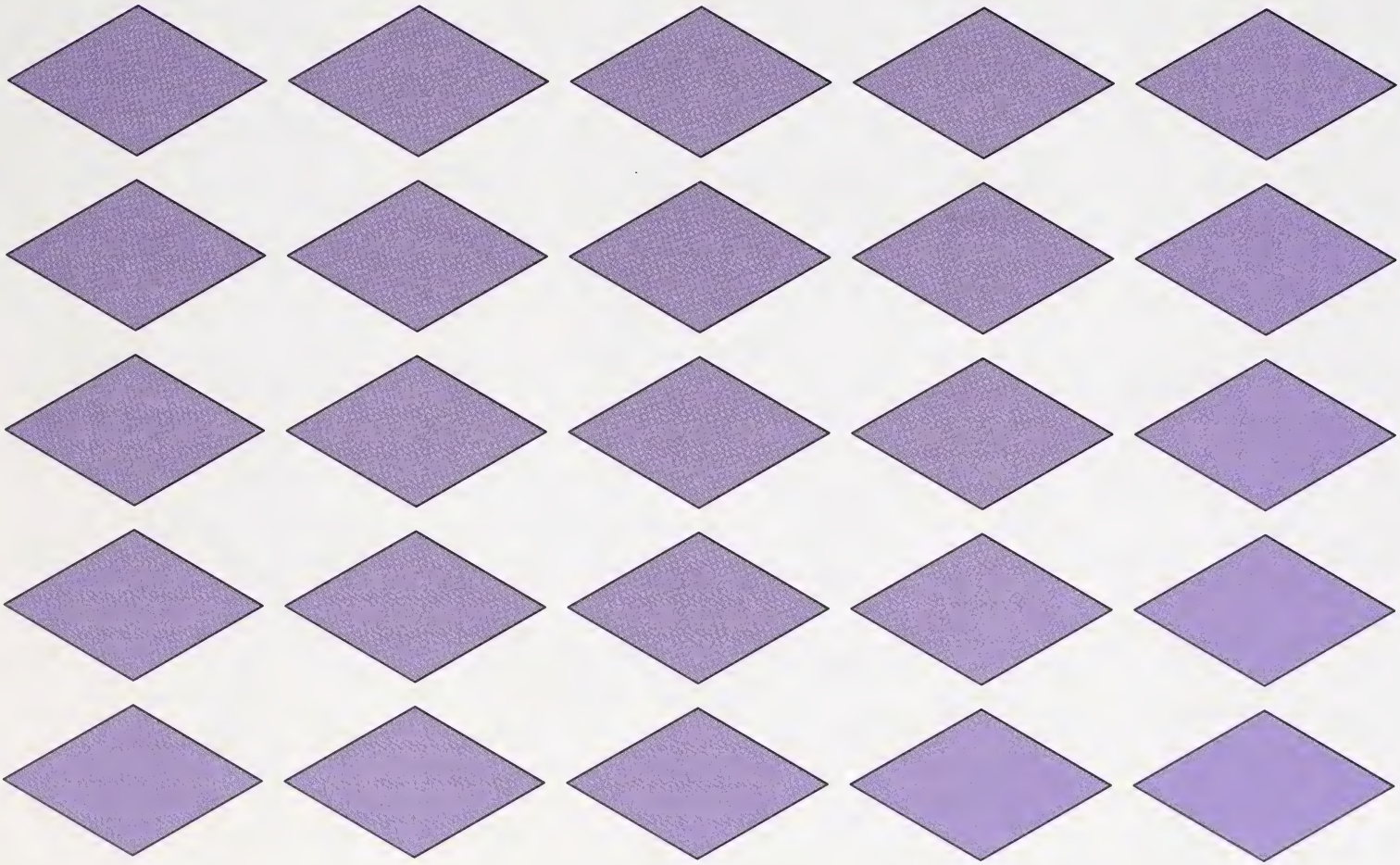
NOVEMBER	OCTOBER	JUNE
FEBRUARY	APRIL	AUGUST
DECEMBER	MAY	JANUARY
SEPTEMBER	JULY	MARCH

Pattern Blocks

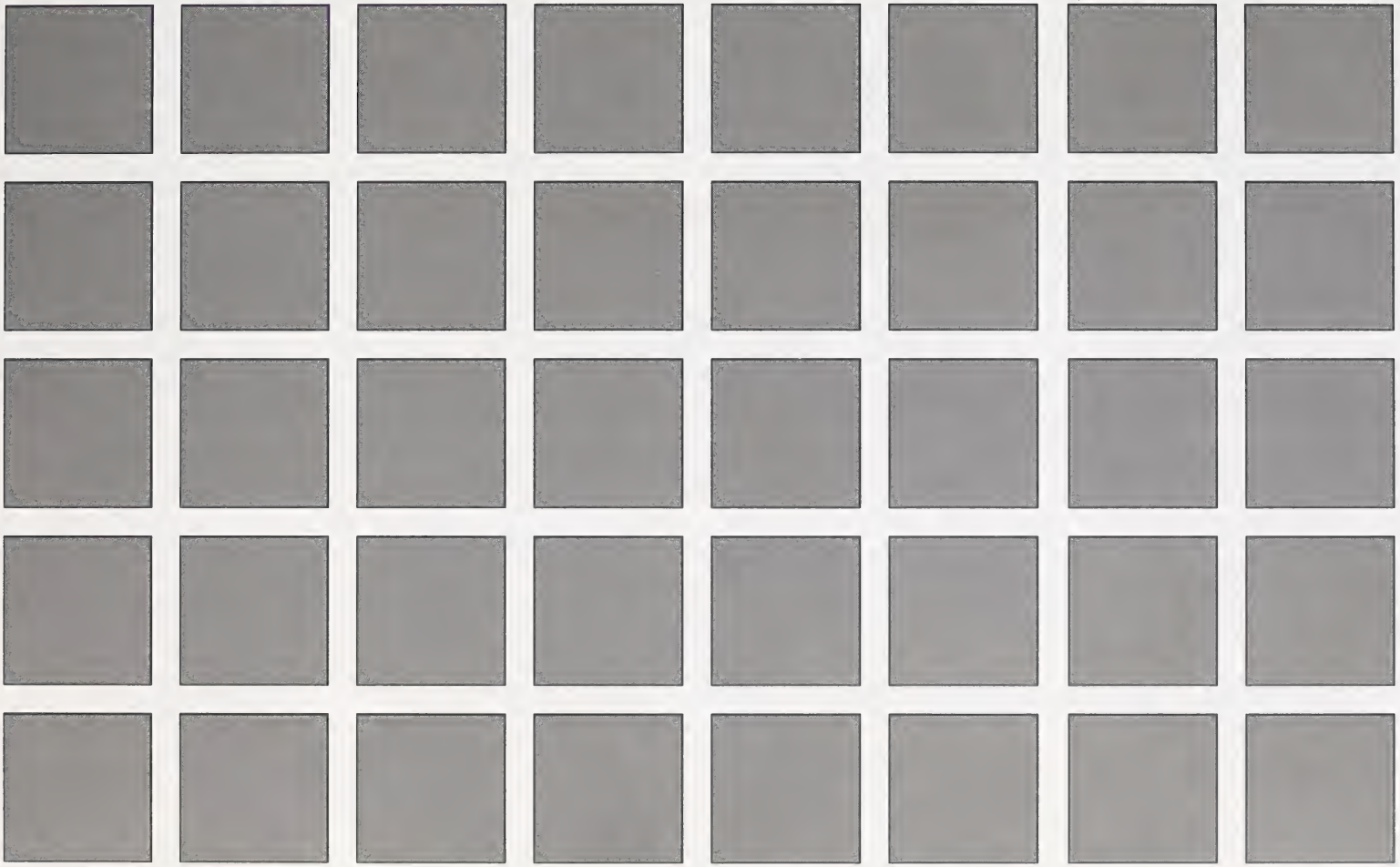
Small Diamonds



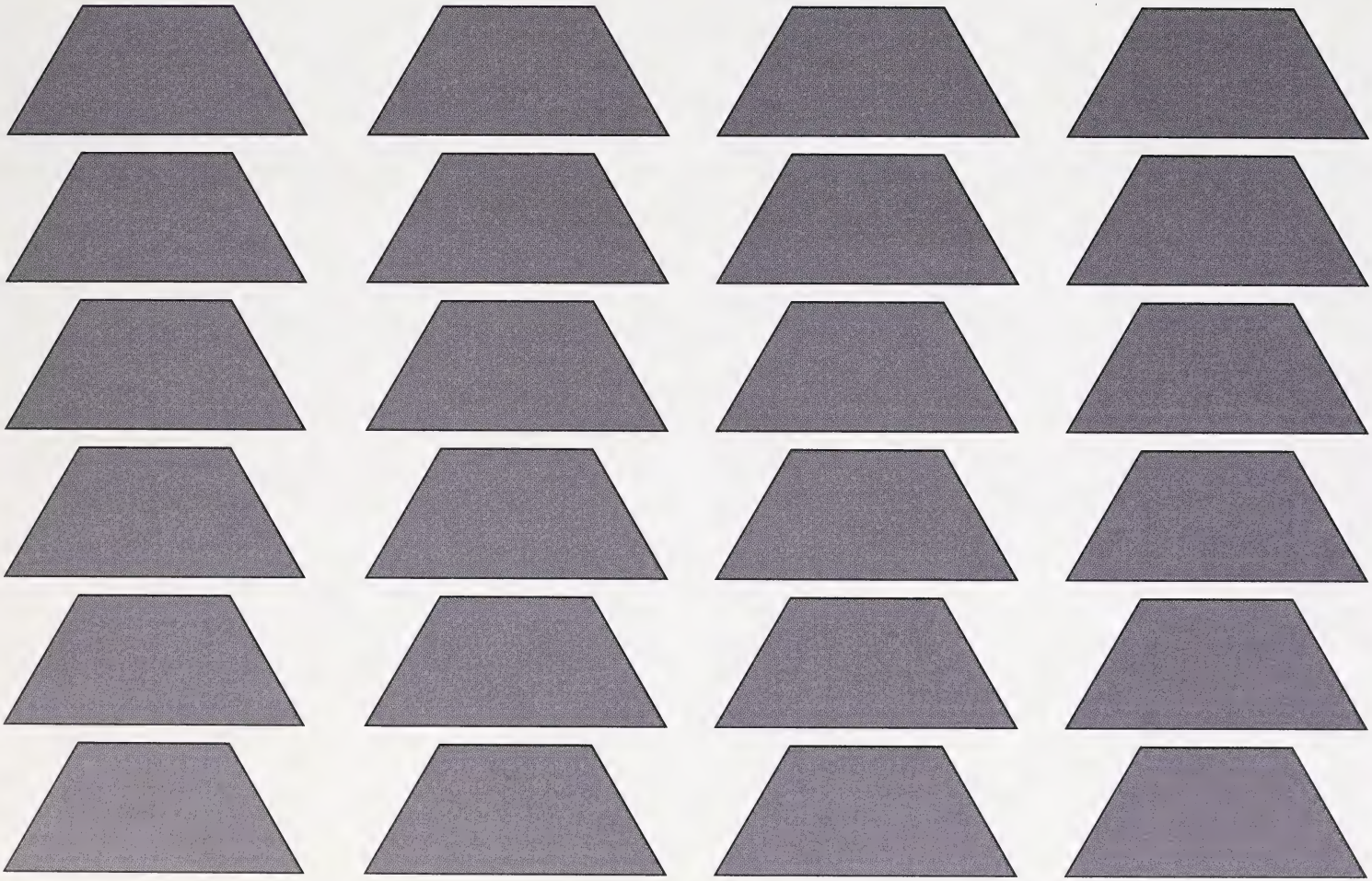
Large Diamonds



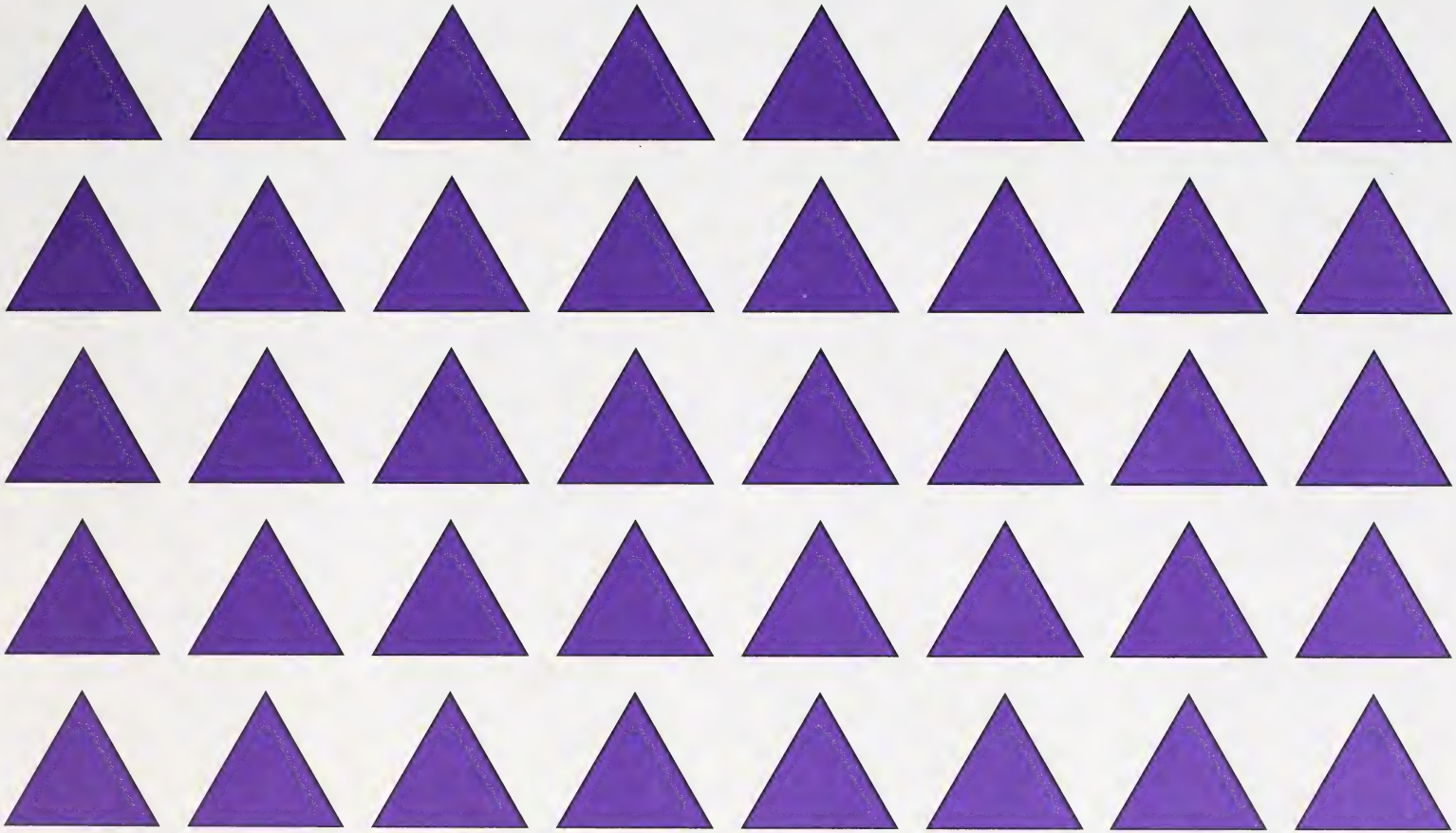
Squares



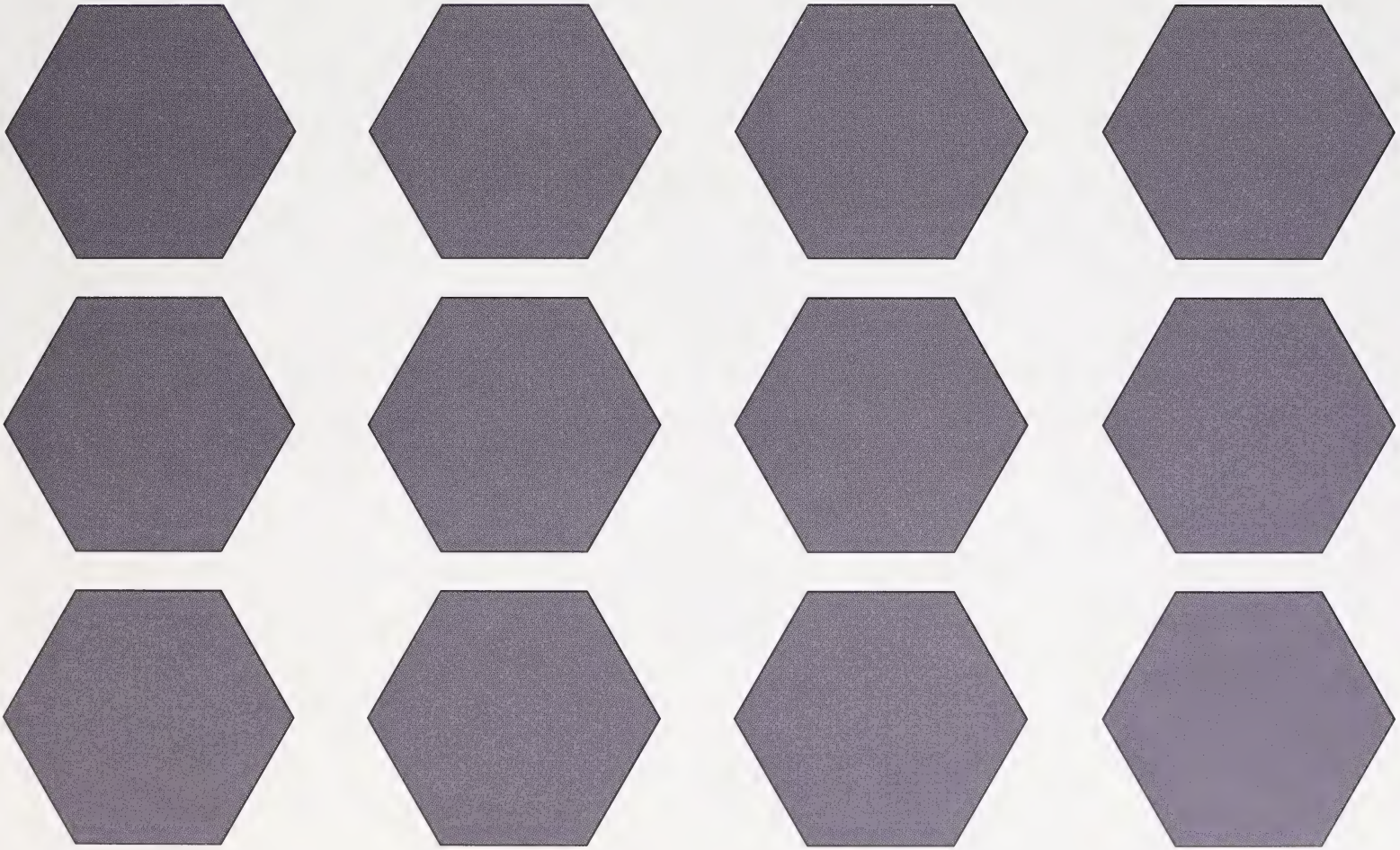
Trapezoids



Triangles



Hexagons



One Hundred Chart

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100